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(21) International Application Number: PCT/US00/08621 (22) International Filing Date: 31 March 2000 (31.03.00) (30) Priority Data: <table><tr><td>60/127,607</td><td>31 March 1999 (31.03.99)</td><td>US</td></tr><tr><td>60/127,636</td><td>2 April 1999 (02.04.99)</td><td>US</td></tr><tr><td>60/127,728</td><td>5 April 1999 (05.04.99)</td><td>US</td></tr><tr><td>09/540,763</td><td>30 March 2000 (30.03.00)</td><td>US</td></tr></table> (63) Related by Continuation (CON) or Continuation-in-Part (CIP) to Earlier Applications: <table><tr><td>US</td><td>60/127,607 (CIP)</td></tr><tr><td>Filed on</td><td>31 March 1999 (31.03.99)</td></tr><tr><td>US</td><td>60/127,636 (CIP)</td></tr><tr><td>Filed on</td><td>2 April 1999 (02.04.99)</td></tr><tr><td>US</td><td>60/127,728 (CIP)</td></tr><tr><td>Filed on</td><td>5 April 1999 (05.04.99)</td></tr><tr><td>US</td><td>09/540,763 (CIP)</td></tr><tr><td>Filed on</td><td>30 March 2000 (30.03.00)</td></tr></table> (71) Applicant (for all designated States except US): CURAGEN CORPORATION [US/US]; 555 Long Wharf Drive, 11th Floor, New Haven, CT 06511 (US).			60/127,607	31 March 1999 (31.03.99)	US	60/127,636	2 April 1999 (02.04.99)	US	60/127,728	5 April 1999 (05.04.99)	US	09/540,763	30 March 2000 (30.03.00)	US	US	60/127,607 (CIP)	Filed on	31 March 1999 (31.03.99)	US	60/127,636 (CIP)	Filed on	2 April 1999 (02.04.99)	US	60/127,728 (CIP)	Filed on	5 April 1999 (05.04.99)	US	09/540,763 (CIP)	Filed on	30 March 2000 (30.03.00)	(72) Inventors; and (75) Inventors/Applicants (for US only): SHIMKETS, Richard, A. [US/US]; 191 Leete Street, West Haven, CT 06516 (US). LEACH, Martin [GB/US]; 884 School Street, Webster, MA 01570 (US). (74) Agent: ELRIFI, Ivor, R.; Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., One Financial Center, Boston, MA 02111 (US). (81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>Without international search report and to be republished upon receipt of that report.</i>
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(54) Title: NUCLEIC ACIDS INCLUDING OPEN READING FRAMES ENCODING POLYPEPTIDES; "ORFX"																															
(57) Abstract <p>The present invention provides open reading frames ORFX, encoding isolated polypeptides, as well as polynucleotides encoding ORFX and antibodies that immunospecifically bind to ORFX or any derivative, variant, mutant, or fragment of the ORFX polypeptides, polynucleotides or antibodies. The invention additionally provides methods in which the ORFX polypeptide, polynucleotide and antibody are used in detection and treatment of a broad range of pathological states, as well as to other uses.</p>																															

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NOVEL POLYNUCLEOTIDES AND POLYPEPTIDES ENCODED THEREBY

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BACKGROUND OF THE INVENTION

The invention relates generally to nucleic acids and polypeptides encoded thereby, and methods of using these nucleic acids and polypeptides.

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SUMMARY OF THE INVENTION

The invention is based in part on the discovery of nucleic acids that include open reading frames encoding novel polypeptides, and on the polypeptides encoded thereby. The nucleic acids and polypeptides are collectively referred to herein as "ORFX".

Accordingly, in one aspect, the invention provides an isolated nucleic acid molecule (SEQ ID NO:2*n*-1, wherein *n* is an integer between 1-3161), that encodes novel polypeptide, or a fragment, homolog, analog or derivative thereof. The nucleic acid can include, *e.g.*, a nucleic acid sequence encoding a polypeptide at least 85% identical to a polypeptide comprising the amino acid sequences of SEQ ID NO:2*n*, wherein *n* is an integer between 1-3161. The nucleic acid can be, *e.g.*, a genomic DNA fragment, or a cDNA molecule.

Also included in the invention is a vector containing one or more of the nucleic acids described herein, and a cell containing the vectors or nucleic acids described herein.

The invention is also directed to host cells transformed with a recombinant expression vector comprising any of the nucleic acid molecules described above.

In another aspect, the invention includes a pharmaceutical composition that includes an ORFX nucleic acid and a pharmaceutically acceptable carrier or diluent.

In a further aspect, the invention includes a substantially purified ORF polypeptide, *e.g.*, any of the ORFX polypeptides encoded by an ORFX nucleic acid, and fragments, homologs, analogs, and derivatives thereof. The invention also includes a pharmaceutical composition that includes a ORFX polypeptide and a pharmaceutically acceptable carrier or diluent.

5 In a still a further aspect, the invention provides an antibody that binds specifically to an ORFX polypeptide. The antibody can be, *e.g.*, a monoclonal or polyclonal antibody, and fragments, homologs, analogs, and derivatives thereof. The invention also includes a pharmaceutical composition including ORFX antibody and a pharmaceutically acceptable carrier or diluent. The invention is also directed to isolated antibodies that bind to an epitope on a
10 polypeptide encoded by any of the nucleic acid molecules described above.

The invention also includes kits comprising any of the pharmaceutical compositions described above.

The invention further provides a method for producing an ORFX polypeptide by providing a cell containing a ORFX nucleic acid, *e.g.*, a vector that includes a ORFX nucleic
15 acid, and culturing the cell under conditions sufficient to express the ORFX polypeptide encoded by the nucleic acid. The expressed ORFX polypeptide is then recovered from the cell. Preferably, the cell produces little or no endogenous ORFX polypeptide. The cell can be, *e.g.*, a prokaryotic cell or eukaryotic cell.

The invention is also directed to methods of identifying an ORFX polypeptide or nucleic
20 acids in a sample by contacting the sample with a compound that specifically binds to the polypeptide or nucleic acid, and detecting complex formation, if present.

The invention further provides methods of identifying a compound that modulates the activity of a ORFX polypeptide by contacting ORFX polypeptide with a compound and determining whether the ORFX polypeptide activity is modified.

25 The invention is also directed to compounds that modulate ORFX polypeptide activity identified by contacting a ORFX polypeptide with the compound and determining whether the compound modifies activity of the ORFX polypeptide, binds to the ORFX polypeptide, or binds to a nucleic acid molecule encoding a ORFX polypeptide.

In a another aspect, the invention provides a method of determining the presence of or
30 predisposition of an ORFX-associated disorder in a subject. The method includes providing a sample from the subject and measuring the amount of ORFX polypeptide in the subject sample.

The amount of ORFX polypeptide in the subject sample is then compared to the amount of ORFX polypeptide in a control sample. An alteration in the amount of ORFX polypeptide in the subject protein sample relative to the amount of ORFX polypeptide in the control protein sample indicates the subject has a tissue proliferation-associated condition. A control sample is preferably taken from a matched individual, *i.e.*, an individual of similar age, sex, or other general condition but who is not suspected of having a tissue proliferation-associated condition. Alternatively, the control sample may be taken from the subject at a time when the subject is not suspected of having a tissue proliferation-associated disorder. In some embodiments, the ORFX is detected using a ORFX antibody.

In a further aspect, the invention provides a method of determining the presence of or predisposition of an ORFX-associated disorder in a subject. The method includes providing a nucleic acid sample, *e.g.*, RNA or DNA, or both, from the subject and measuring the amount of the ORFX nucleic acid in the subject nucleic acid sample. The amount of ORFX nucleic acid sample in the subject nucleic acid is then compared to the amount of an ORFX nucleic acid in a control sample. An alteration in the amount of ORFX nucleic acid in the sample relative to the amount of ORFX in the control sample indicates the subject has a tissue proliferation-associated disorder.

In a still further aspect, the invention provides method of treating or preventing or delaying a ORFX-associated disorder. The method includes administering to a subject in which such treatment or prevention or delay is desired a ORFX nucleic acid, a ORFX polypeptide, or an ORFX antibody in an amount sufficient to treat, prevent, or delay a tissue proliferation-associated disorder in the subject.

Unless otherwise defined, all technical and scientific terms used herein have the same meaning as commonly understood by one of ordinary skill in the art to which this invention belongs. Although methods and materials similar or equivalent to those described herein can be used in the practice or testing of the present invention, suitable methods and materials are described below. All publications, patent applications, patents, and other references mentioned herein are incorporated by reference in their entirety. In the case of conflict, the present specification, including definitions, will control. In addition, the materials, methods, and examples are illustrative only and not intended to be limiting.

Other features and advantages of the invention will be apparent from the following detailed description and claims.

DETAILED DESCRIPTION OF THE INVENTION

The invention provides novel polypeptides and nucleotides encoded thereby. The polynucleotides and their encoded polypeptides can be grouped according to the functions played by their gene products. Such functions include, structural proteins, proteins from which associated with metabolic pathways fatty acid metabolism, glycolysis, intermediary metabolism, calcium metabolism, proteases, and amino acid metabolism, etc.

Included in the invention are 3161 novel nucleic acid sequences and their encoded polypeptides. The sequences are collectively referred to as "ORFX nucleic acids" or ORFX polynucleotides" and the corresponding encoded polypeptide is referred to as a "ORFX polypeptide" or ORFX protein". For example, an ORFX nucleic acid according to the invention is a nucleic acid including an ORF1 nucleic acid, and an ORF polypeptide according to the invention is a polypeptide that includes the amino acid sequence of an ORF1 polypeptide. Unless indicated otherwise, "ORFX" is meant to refer to any of the ORF1-3161 sequences disclosed herein.

Table 1 provides a summary of the ORFX nucleic acids and their encoded polypeptides are summarized in Table 1. Nucleic acid sequences and polypeptide sequences for ORFX nucleic acids according to the invention is provided in the section of the specification entitled "Disclosed Sequences of ORFX Nucleic Acid and Polypeptide Sequences."

Column 1 of Table 1, entitled "ORF #", denotes an ORF number assigned to a nucleic acid containing an open reading frame according to the invention.

Column 2 of Table 1, entitled "Internal Identification number (Nucleic Acid Sequence Identification Number, Polypeptide Sequence Identification Number), provides an internal identification number for the indicated ORF, along with sequence identification numbers (SEQ ID NOs.) corresponding to the indicated ORF. In general, for an ORF n according to the invention (wherein n is any integer from 1 to 3161), a nucleic acid corresponding to the ORF is SEQ ID NO:2 n -1, and an amino acid sequence encoded by the ORF is SEQ ID NO:2 n . For example, a nucleic acid sequence corresponding to an ORF1 nucleic acid is SEQ ID NO:1, and a polypeptide sequence corresponding to an ORF1 polypeptide is SEQ ID NO:2. Similarly, a

nucleic acid sequence corresponding to an ORF4 nucleic acid is SEQ ID NO:7, and a polypeptide sequence corresponding to an ORF4 polypeptide is SEQ ID NO:8; a nucleic acid sequence corresponding to an ORF198 nucleic acid sequence is SEQ ID NO:395, and a polypeptide sequence corresponding to an ORF198 polypeptide is SEQ ID NO:396. Nucleic acid sequences and polypeptide sequences for ORFX nucleic acids according to the invention are provided in the section of the specification entitled "Disclosed Sequences of ORFX Nucleic Acid and Polypeptide Sequences."

Column 2 of Table 1, entitled "Protein Similarity", lists previously described proteins that are related to polypeptides encoded by the ORFs. Genbank identifiers for the previously described proteins are provided. These can be retrieved from <http://www.ncbi.nlm.nih.gov/>.

To determine similarity to previously described proteins, polypeptides encoded by ORFX DNA sequences were tested using the Framesearch Algorithm against a nonredundant version of the GenPept Database from NCBI/Genbank. DNA sequences that had a score of '90' or above (Framesearch algorithm score, Edelman et. al. GCG Genetics) to a known protein were selected. Open reading frames were extended beyond the region of the protein matched using standard DNA translation and codon tables. Novel proteins that lacked a protein match were translated against the standard genetic codons and proteins with an ORF at least 80 amino acids and containing a Methionine start are included in the Table.

Column 3 of Table 3, entitled "Protein Domains", lists previously described protein domains, designated by pfam entries, that are present in polypeptides encoded by the ORFs. Also included in column 3 are proteins in which these domains are present. The pfam entries can be retrieved from <http://pfam.wustl.edu/>. DNA sequences were translated in all six frames and tested using the Hmmer Algorithm against the Pfam Database (References to the algorithm and Pfam database can be found at <http://pfam.wustl.edu/>). Translated DNA sequences that matched a protein domain entry in the Pfam database AND had a score of '7.5' were selected.

Column 4 of Table 3, entitled "Protein Classification", lists the type of classification assigned for the protein, based on its homology. Examples of proteins in the classification include the following proteins:

Amylases

Amylase is responsible for endohydrolysis of 1,4- α -glucosidic linkages in oligosaccharides and polysaccharides. Variations in amylase gene may be indicative of delayed maturation and of various amylase producing neoplasms and carcinomas.

5 **Amyloid**

The serum amyloid A (SAA) proteins comprise a family of vertebrate proteins that associate predominantly with high density lipoproteins (HDL). The synthesis of certain members of the family is greatly increased in inflammation. Prolonged elevation of plasma SAA levels, as in chronic inflammation, results in a pathological condition, called amyloidosis, which affects
10 the liver, kidney and spleen and which is characterized by the highly insoluble accumulation of SAA in these tissues. Amyloid selectively inhibits insulin-stimulated glucose utilization and glycogen deposition in muscle, while not affecting adipocyte glucose metabolism. Deposition of fibrillar amyloid proteins intraneuronally, as neurofibrillary tangles, extracellularly, as plaques and in blood vessels, is characteristic of both Alzheimer's disease and aged Down's syndrome.
15 Amyloid deposition is also associated with type II diabetes mellitus.

Angiopoietin

Members of the angiopoietin/fibrinogen family have been shown to stimulate the generation of new blood vessels, inhibit the generation of new blood vessels, and perform several roles in blood clotting. This generation of new blood vessels, called angiogenesis, is also an
20 essential step in tumor growth in order for the tumor to get the blood supply it needs to expand. Variation in these genes may be predictive of any form of heart disease, numerous blood clotting disorders, stroke, hypertension and predisposition to tumor formation and metastasis. In particular, these variants may be predictive of the response to various antihypertensive drugs and chemotherapeutic and anti-tumor agents.

25 **Apoptosis-related proteins**

Active cell suicide (apoptosis) is induced by events such as growth factor withdrawal and toxins. It is controlled by regulators, which have either an inhibitory effect on programmed cell

death (anti-apoptotic) or block the protective effect of inhibitors (pro-apoptotic). Many viruses have found a way of countering defensive apoptosis by encoding their own anti-apoptosis genes preventing their target-cells from dying too soon. Variants of apoptosis related genes may be useful in formulation of anti-aging drugs.

5 **Cadherin, Cyclin, Polymerase, Oncogenes, Histones, Kinases**

Members of the cell division/cell cycle pathways such as cyclins, many transcription factors and kinases, DNA polymerases, histones, helicases and other oncogenes play a critical role in carcinogenesis where the uncontrolled proliferation of cells leads to tumor formation and eventually metastasis. Variation in these genes may be predictive of predisposition to any form
10 of cancer, from increased risk of tumor formation to increased rate of metastasis. In particular, these variants may be predictive of the response to various chemotherapeutic and anti-tumor agents.

Colony-stimulating factor-related proteins

Granulocyte/macrophage colony-stimulating factors are cytokines that act in
15 hematopoiesis by controlling the production, differentiation, and function of 2 related white cell populations of the blood, the granulocytes and the monocytes-macrophages.

Complement-related proteins

Complement proteins are immune associated cytotoxic agents, acting in a chain reaction to exterminate target cells to that were opsonized (primed) with antibodies, by forming a
20 membrane attack complex (MAC). The mechanism of killing is by opening pores in the target cell membrane. Variations in 20 complement genes or their inhibitors are associated with many autoimmune disorders. Modified serum levels of complement products cause edemas of various tissues, lupus (SLE), vasculitis, glomerulonephritis, renal failure, hemolytic anemia, thrombocytopenia, and arthritis. They interfere with mechanisms of ADCC (antibody dependent
25 cell cytotoxicity), severely impair immune competence and reduce phagocytic ability. Variants of complement genes may also be indicative of type I diabetes mellitus, meningitis neurological disorders such as nemaline myopathy, neonatal hypotonia, muscular disorders such as congenital myopathy and other diseases.

Cytochrome

The respiratory chain is a key biochemical pathway which is essential to all aerobic cells. There are five different cytochromes involved in the chain. These are heme bound proteins which serve as electron carriers. Modifications in these genes may be predictive of ataxia
5 areflexia, dementia and myopathic and neuropathic changes in muscles. Also, association with various types of solid tumors.

Kinesins

Kinesins are tubulin molecular motors that function to transport organelles within cells and to move chromosomes along microtubules during cell division. Modifications of these genes
10 may be indicative of neurological disorders such as Pick disease of the brain, tuberous sclerosis.

Cytokines, Interferon, Interleukin

Members of the cytokine families are known for their potent ability to stimulate cell growth and division even at low concentrations. Cytokines such as erythropoietin are cell-specific in their growth stimulation; erythropoietin is useful for the stimulation of the
15 proliferation of erythroblasts. Variants in cytokines may be predictive for a wide variety of diseases, including cancer predisposition.

G-protein coupled receptors

G-protein coupled receptors (also called R7G) are an extensive group of hormones, neurotransmitters, odorants and light receptors which transduce extracellular signals by
20 interaction with guanine nucleotide-binding (G) proteins. Alterations in genes coding for G-coupled proteins may be involved in and indicative of a vast number of physiological conditions. These include blood pressure regulation, renal dysfunctions, male infertility, dopamine associated cognitive, emotional, and endocrine functions, hypercalcemia, chondrodysplasia and osteoporosis, pseudohypoparathyroidism, growth retardation and
25 dwarfism.

Thioesterases

Eukaryotic thiol proteases are a family of proteolytic enzymes which contain an active site cysteine. Catalysis proceeds through a thioester intermediate and is facilitated by a nearby histidine side chain; an asparagine completes the essential catalytic triad. Variants of thioester associated genes may be predictive of neuronal disorders and mental illnesses such as Ceroid Lipoffiscinosis, Neuronal 1, Infantile, Santavuori disease and more.

The key to the molecule type is as follows:

10	Abbrev:	Title:
	amylase	amylase protein
	amylaseinhib	amylase inhibitor
	amyloid	amyloid protein
15	apoptosis	apoptosis associated protein
	apoptosisinhib	apoptosis inhibitors
	apoptosisrecep	apoptosis receptors
	ATPase_associated	ATPase associated protein
	biotindp	biotin dependent enzyme/protein
20	cadherin	cadherin protein
	calcium_channel	calcium channel protein
	carboxylase	carboxylase protein
	cathepsin	cathepsin/carboxypeptidases
	cathepsininhib	cathepsin/carboxypeptidase inhibitor
25	chloride_channel	chloride channel protein
	collagen	collagen
	complement	complement protein
	complementrecept	complement receptor protein
	complementinhib	complement inhibitor
30	csf	colony stimulating factor
	csfrecept	colony stimulating factor receptor
	cyclin	cyclin protein
	cyto450	cytochrome p450 protein
	cytochrome	cytochrome related protein
35	deaminase	deaminase
	dehydrogenase	dehydrogenase
	desaturase	desaturase
	dna_rna_bind	DNA/RNA binding protein/factor
	dna_rna_inhib	DNA/RNA binding protein/factor inhibitor
40	dynein	dynein

	elastase	elastase
	elastaseinhib	elastase inhibitor
	eph	EPH family of tyrosine kinases
	esterase	esterase
5	esteraseinhib	esterase inhibitor
	fgf	fibroblast growth factor
	fgfreceptor	fibroblast growth factor receptor
	gaba	GABA receptor
10	glucoamylase	glucoamylase
	glucoronidase	glucoronidase
	glycoprotein	glycoprotein
	Guanylyl	guanylylate cyclase
	helicase	helicase
	histone	histone
15	HOM	homologous
	homeobox	homeobox protein
	hydrolase	hydrolase
	hydroxysteroid	hydroxysteroid associated protein
	hypoxanthine	hypoxanthine associated protein
20	immunoglob	immunoglobulin
	immunoglobrecept	immunoglobulin receptor
	interferon	interferon
	interleukin	interleukin
	interleukinrecept	interleukin receptor
25	isomerase	isomerase
	isomeraseinhibitor	isomerase inhibitor
	isomerasereceptor	isomerase receptor
	kinase	kinase
	kinaseinhibitor	kinase inhibitor
30	kinasereceptor	kinase receptor
	kinesin	kinesin
	laminin	laminin associated protein
	lipase	lipase
	metallothionein	metallothionein
35	MHC	major histocompatibility complex
	misc_channel	miscellaneous channel
	ngf	nerve growth factor
	nuci_recpt	nuclear receptor
	nuclease	nuclease
40	oncogene	oncogene associated protein
	oxidase	oxidase
	oxygenase	oxygenase
	peptidase	peptidase
	peroxidase	peroxidase
45	phosphatase	phosphatase
	phosphataseinhib	phosphatase inhibitor

	phosphorylase	phosphorylase
	PIR	PIR DATABASE (release 56, 29-OCT-1998)
5	polymerase	polymerase
	potassium_channel	potassium channel protein
	prostaglandin	prostaglandin
	protease	protease
	proteaseinhib	protease inhibitor
10	reductase	reductase
	ribosomalprot	ribosomal associated protein
	RTR	EMBLDATABASE translated entries not to be incorporated into SWISS-PROT (20-JUL-1998)
15	SIM	similar
	SPTR	EMBL DATABASE translated entries to be incorporated into SWISS-PROT (20-JUL-1998)
	struct	structural associated protein
20	sulfotransferase	sulfotransferase
	SWP	SWISS-PROT DATABASE (release 18-OCT-1998)
	SWPN	SWISS-PROT Update (release 11-NOV-98)
	synthase	synthase
25	tgf	transforming growth factor
	tgfreceptor	transforming growth factor receptor
	thioesterase	thioesterase
	thiolase	thiolase
	tm7	seven transmembrane domain G-protein coupled receptor
30	tnf	necrosis factor receptor
	traffic	tumor necrosis factor
	tnfreceptor	tumor trafficking associated protein
	TRN	EMBL DATABASE translated entries update (20-JUL-1998)
35	transcriptfactor	transcription factor
	transferase	transferase
	transport	transport protein
	tubulin	tubulin
40	ubiquitin	ubiquitin
	unclassified	Protein not categorized into one of the aforementioned protein families
	water channel	water channel protein

Column 5 of Table 1, entitled, "Cells or Tissues in Which Gene is Expressed", denotes tissues, represented by five digit numbers, in which RNA homologous to the ORF nucleic acid sequences is present. Tissues or cells corresponding to the numbers are provided in Table 2.

ORFX nucleic acids, and their encoded polypeptides, according to the invention are useful in a variety of applications and contexts. For example, various ORFX nucleic acids and polypeptides according to the invention are useful, *inter alia*, as novel members of the protein families indicated in Table 1, and/or according to the presence of domains and sequence relatedness to previously described proteins as summarized in Table 1.

ORFX nucleic acids and polypeptides according to the invention can also be used to identify cell types listed in Table 1 for an indicated ORFX according to the invention. Additional utilities for ORFX nucleic acids and polypeptides according to the invention are disclosed herein.

ORFX Nucleic Acids

The novel nucleic acids of the invention include those that encode an ORFX or ORFX-like protein, or biologically active portions thereof. The nucleic acids include nucleic acids encoding polypeptides that include the amino acid sequence of one or more of SEQ ID NO:2*n*, wherein *n* = 1 to 3161. The encoded polypeptides can thus include, *e.g.*, the amino acid sequences of SEQ ID NO: 2, 4, 6, 8, 10, ..., 6310, 6312, 6314, 6316, 6318, 6320, and/or 6322.

In some embodiments, a nucleic acid encoding a polypeptide having the amino acid sequence of one or more of SEQ ID NO:2*n* (wherein *n* = 1 to 3161) includes the nucleic acid sequence of any of SEQ ID NO:2*n*-1 (wherein *n* = 1 to 3161), or a fragment thereof. Additionally, the invention includes mutant or variant nucleic acids of any of SEQ ID NO:2*n*-1 (wherein *n* = 1 to 3161), or a fragment thereof, any of whose bases may be changed from the disclosed sequence while still encoding a protein that maintains its ORFX-like activities and physiological functions. The invention further includes the complement of the nucleic acid sequence of any of SEQ ID NO:2*n*-1 (wherein *n* = 1 to 3161), including fragments, derivatives,

analog and homolog thereof. The invention additionally includes nucleic acids or nucleic acid fragments, or complements thereto, whose structures include chemical modifications.

Also included are nucleic acid fragments sufficient for use as hybridization probes to identify ORFX-encoding nucleic acids (*e.g.*, ORFX mRNA) and fragments for use as
5 polymerase chain reaction (PCR) primers for the amplification or mutation of ORFX nucleic acid molecules. As used herein, the term "nucleic acid molecule" is intended to include DNA molecules (*e.g.*, cDNA or genomic DNA), RNA molecules (*e.g.*, mRNA), analogs of the DNA or RNA generated using nucleotide analogs, and derivatives, fragments and homologs thereof. The nucleic acid molecule can be single-stranded or double-stranded, but preferably is
10 double-stranded DNA.

"Probes" refer to nucleic acid sequences of variable length, preferably between at least about 10 nucleotides (nt), 100 nt, or as many as about, *e.g.*, 6,000 nt, depending on use. Probes are used in the detection of identical, similar, or complementary nucleic acid sequences. Longer length probes are usually obtained from a natural or recombinant source, are highly specific and
15 much slower to hybridize than oligomers. Probes may be single- or double-stranded and designed to have specificity in PCR, membrane-based hybridization technologies, or ELISA-like technologies.

An "isolated" nucleic acid molecule is one that is separated from other nucleic acid molecules that are present in the natural source of the nucleic acid. Examples of isolated nucleic
20 acid molecules include, but are not limited to, recombinant DNA molecules contained in a vector, recombinant DNA molecules maintained in a heterologous host cell, partially or substantially purified nucleic acid molecules, and synthetic DNA or RNA molecules. Preferably, an "isolated" nucleic acid is free of sequences which naturally flank the nucleic acid (*i.e.*, sequences located at the 5' and 3' ends of the nucleic acid) in the genomic DNA of the organism
25 from which the nucleic acid is derived. For example, in various embodiments, the isolated ORFX nucleic acid molecule can contain less than about 50 kb, 25 kb, 5 kb, 4 kb, 3 kb, 2 kb, 1 kb, 0.5 kb or 0.1 kb of nucleotide sequences which naturally flank the nucleic acid molecule in genomic DNA of the cell from which the nucleic acid is derived. Moreover, an "isolated" nucleic acid molecule, such as a cDNA molecule, can be substantially free of other cellular
30 material or culture medium when produced by recombinant techniques, or of chemical precursors or other chemicals when chemically synthesized.

A nucleic acid molecule of the present invention, *e.g.*, a nucleic acid molecule having the nucleotide sequence of SEQ ID NO:2*n*-1 (wherein *n* = 1 to 3161), or a complement of any of this nucleotide sequence, can be isolated using standard molecular biology techniques and the sequence information provided herein. Using all or a portion of the nucleic acid sequence of any of SEQ ID NO:2*n*-1 (wherein *n*=1 to 3161) as a hybridization probe, ORFX nucleic acid sequences can be isolated using standard hybridization and cloning techniques (*e.g.*, as described in Sambrook *et al.*, eds., MOLECULAR CLONING: A LABORATORY MANUAL 2nd Ed., Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY, 1989; and Ausubel, *et al.*, eds., CURRENT PROTOCOLS IN MOLECULAR BIOLOGY, John Wiley & Sons, New York, NY, 1993.)

A nucleic acid of the invention can be amplified using cDNA, mRNA or alternatively, genomic DNA, as a template and appropriate oligonucleotide primers according to standard PCR amplification techniques. The nucleic acid so amplified can be cloned into an appropriate vector and characterized by DNA sequence analysis. Furthermore, oligonucleotides corresponding to ORFX nucleotide sequences can be prepared by standard synthetic techniques, *e.g.*, using an automated DNA synthesizer.

As used herein, the term "oligonucleotide" refers to a series of linked nucleotide residues, which oligonucleotide has a sufficient number of nucleotide bases to be used in a PCR reaction. A short oligonucleotide sequence may be based on, or designed from, a genomic or cDNA sequence and is used to amplify, confirm, or reveal the presence of an identical, similar or complementary DNA or RNA in a particular cell or tissue. Oligonucleotides comprise portions of a nucleic acid sequence having about 10 nt, 50 nt, or 100 nt in length, preferably about 15 nt to 30 nt in length. In one embodiment, an oligonucleotide comprising a nucleic acid molecule less than 100 nt in length would further comprise at least 6 contiguous nucleotides of any of SEQ ID NO:2*n*-1 (wherein *n* = 1 to 3161), or a complement thereof. Oligonucleotides may be chemically synthesized and may be used as probes.

In another embodiment, an isolated nucleic acid molecule of the invention comprises a nucleic acid molecule that is a complement of the nucleotide sequence shown in any of SEQ ID NO:2*n*-1 (wherein *n* = 1 to 3161). In another embodiment, an isolated nucleic acid molecule of the invention comprises a nucleic acid molecule that is a complement of the nucleotide sequence shown in any of SEQ ID NO:2*n*-1 (wherein *n* = 1 to 3161), or a portion of this nucleotide sequence. A nucleic acid molecule that is complementary to the nucleotide sequence shown in

is one that is sufficiently complementary to the nucleotide sequence shown in of any of SEQ ID NO:2*n*-1 (wherein *n* = 1 to 3161) that it can hydrogen bond with little or no mismatches to the nucleotide sequence shown in of any of SEQ ID NO:2*n*-1 (wherein *n* = 1 to 3161),, thereby forming a stable duplex.

5 As used herein, the term "complementary" refers to Watson-Crick or Hoogsteen base pairing between nucleotides units of a nucleic acid molecule, and the term "binding" means the physical or chemical interaction between two polypeptides or compounds or associated polypeptides or compounds or combinations thereof. Binding includes ionic, non-ionic, Von der Waals, hydrophobic interactions, etc. A physical interaction can be either direct or indirect.

10 Indirect interactions may be through or due to the effects of another polypeptide or compound. Direct binding refers to interactions that do not take place through, or due to, the effect of another polypeptide or compound, but instead are without other substantial chemical intermediates.

 Moreover, the nucleic acid molecule of the invention can comprise only a portion of the nucleic acid sequence of any of SEQ ID NO:2*n*-1 (wherein *n* = 1 to 3161), *e.g.*, a fragment that can be used as a probe or primer, or a fragment encoding a biologically active portion of ORFX. Fragments provided herein are defined as sequences of at least 6 (contiguous) nucleic acids or at least 4 (contiguous) amino acids, a length sufficient to allow for specific hybridization in the case of nucleic acids or for specific recognition of an epitope in the case of amino acids, respectively, and are at most some portion less than a full length sequence. Fragments may be derived from any contiguous portion of a nucleic acid or amino acid sequence of choice. Derivatives are nucleic acid sequences or amino acid sequences formed from the native compounds either directly or by modification or partial substitution. Analogs are nucleic acid sequences or amino acid sequences that have a structure similar to, but not identical to, the native compound but differs from it in respect to certain components or side chains. Analogs may be synthetic or from a different evolutionary origin and may have a similar or opposite metabolic activity compared to wild type.

 Derivatives and analogs may be full length or other than full length, if the derivative or analog contains a modified nucleic acid or amino acid, as described below. Derivatives or analogs of the nucleic acids or proteins of the invention include, but are not limited to, molecules comprising regions that are substantially homologous to the nucleic acids or proteins of the

invention, in various embodiments, by at least about 70%, 80%, 85%, 90%, 95%, 98%, or even 99% identity (with a preferred identity of 80-99%) over a nucleic acid or amino acid sequence of identical size or when compared to an aligned sequence in which the alignment is done by a computer homology program known in the art, or whose encoding nucleic acid is capable of hybridizing to the complement of a sequence encoding the aforementioned proteins under stringent, moderately stringent, or low stringent conditions. See *e.g.* Ausubel, *et al.*, CURRENT PROTOCOLS IN MOLECULAR BIOLOGY, John Wiley & Sons, New York, NY, 1993, and below. An exemplary program is the Gap program (Wisconsin Sequence Analysis Package, Version 8 for UNIX, Genetics Computer Group, University Research Park, Madison, WI) using the default settings, which uses the algorithm of Smith and Waterman (Adv. Appl. Math., 1981, 2: 482-489, which is incorporated herein by reference in its entirety).

A "homologous nucleic acid sequence" or "homologous amino acid sequence," or variations thereof, refer to sequences characterized by a homology at the nucleotide level or amino acid level as discussed above. Homologous nucleotide sequences encode those sequences coding for isoforms of ORFX polypeptide. Isoforms can be expressed in different tissues of the same organism as a result of, for example, alternative splicing of RNA. Alternatively, isoforms can be encoded by different genes. In the present invention, homologous nucleotide sequences include nucleotide sequences encoding for a ORFX polypeptide of species other than humans, including, but not limited to, mammals, and thus can include, *e.g.*, mouse, rat, rabbit, dog, cat, cow, horse, and other organisms. Homologous nucleotide sequences also include, but are not limited to, naturally occurring allelic variations and mutations of the nucleotide sequences set forth herein. A homologous nucleotide sequence does not, however, include the nucleotide sequence encoding human ORFX protein. Homologous nucleic acid sequences include those nucleic acid sequences that encode conservative amino acid substitutions (see below) in any of SEQ ID NO:2*n* (wherein *n* = 1 to 3161) as well as a polypeptide having ORFX activity. Biological activities of the ORFX proteins are described below. A homologous amino acid sequence does not encode the amino acid sequence of a human ORFX polypeptide.

The nucleotide sequence determined from the cloning of the human ORFX gene allows for the generation of probes and primers designed for use in identifying the cell types disclosed and/or cloning ORFX homologues in other cell types, *e.g.*, from other tissues, as well as ORFX homologues from other mammals. The probe/primer typically comprises a substantially purified

oligonucleotide. The oligonucleotide typically comprises a region of nucleotide sequence that hybridizes under stringent conditions to at least about 12, 25, 50, 100, 150, 200, 250, 300, 350 or 400 or more consecutive sense strand nucleotide sequence of SEQ ID NO:2*n*-1 (wherein *n* = 1 to 3161); or an anti-sense strand nucleotide sequence of SEQ ID NO:2*n*-1 (wherein *n* = 1 to 3161); or of a naturally occurring mutant of SEQ ID NO:2*n*-1 (wherein *n* = 1 to 3161).

Probes based on the human ORFX nucleotide sequence can be used to detect transcripts or genomic sequences encoding the same or homologous proteins. In various embodiments, the probe further comprises a label group attached thereto, *e.g.*, the label group can be a radioisotope, a fluorescent compound, an enzyme, or an enzyme co-factor. Such probes can be used as a part of a diagnostic test kit for identifying cells or tissue which misexpress a ORFX protein, such as by measuring a level of a ORFX-encoding nucleic acid in a sample of cells from a subject *e.g.*, detecting ORFX mRNA levels or determining whether a genomic ORFX gene has been mutated or deleted.

"A polypeptide having a biologically active portion of ORFX" refers to polypeptides exhibiting activity similar, but not necessarily identical to, an activity of a polypeptide of the present invention, including mature forms, as measured in a particular biological assay, with or without dose dependency. A nucleic acid fragment encoding a "biologically active portion of ORFX" can be prepared by isolating a portion of SEQ ID NO:2*n*-1 (wherein *n* = 1 to 3161), that encodes a polypeptide having a ORFX biological activity (biological activities of the ORFX proteins are summarized in Table 1), expressing the encoded portion of ORFX protein (*e.g.*, by recombinant expression *in vitro*) and assessing the activity of the encoded portion of ORFX. For example, a nucleic acid fragment encoding a biologically active portion of ORFX can optionally include a domain as shown in Table 1, column 4.

ORFX variants

The invention further encompasses nucleic acid molecules that differ from the disclosed ORFX nucleotide sequences due to degeneracy of the genetic code. These nucleic acids thus encode the same ORFX protein as that encoded by the nucleotide sequence shown in SEQ ID NO:2*n*-1 (wherein *n* = 1 to 3161). In another embodiment, an isolated nucleic acid molecule of the invention has a nucleotide sequence encoding a protein having an amino acid sequence shown in any of SEQ ID NO:2*n* (wherein *n* = 1 to 3161).

In addition to the human ORFX nucleotide sequence shown in any of SEQ ID NO:2*n*-1 (wherein *n* = 1 to 3161), it will be appreciated by those skilled in the art that DNA sequence polymorphisms that lead to changes in the amino acid sequences of ORFX may exist within a population (*e.g.*, the human population). Such genetic polymorphism in the ORFX gene may exist among individuals within a population due to natural allelic variation. As used herein, the terms "gene" and "recombinant gene" refer to nucleic acid molecules comprising an open reading frame encoding a ORFX protein, preferably a mammalian ORFX protein. Such natural allelic variations can typically result in 1-5% variance in the nucleotide sequence of the ORFX gene. Any and all such nucleotide variations and resulting amino acid polymorphisms in ORFX that are the result of natural allelic variation and that do not alter the functional activity of ORFX are intended to be within the scope of the invention.

Moreover, nucleic acid molecules encoding ORFX proteins from other species, and thus that have a nucleotide sequence that differs from the human sequence of any of SEQ ID NO:2*n*-1 (wherein *n* = 1 to 3161), are intended to be within the scope of the invention. Nucleic acid molecules corresponding to natural allelic variants and homologues of the ORFX cDNAs of the invention can be isolated based on their homology to the human ORFX nucleic acids disclosed herein using the human cDNAs, or a portion thereof, as a hybridization probe according to standard hybridization techniques under stringent hybridization conditions.

In another embodiment, an isolated nucleic acid molecule of the invention is at least 6 nucleotides in length and hybridizes under stringent conditions to the nucleic acid molecule comprising the nucleotide sequence of any of SEQ ID NO:2*n*-1 (wherein *n* = 1 to 3161). In another embodiment, the nucleic acid is at least 10, 25, 50, 100, 250, 500 or 750 nucleotides in length. In another embodiment, an isolated nucleic acid molecule of the invention hybridizes to the coding region. As used herein, the term "hybridizes under stringent conditions" is intended to describe conditions for hybridization and washing under which nucleotide sequences at least 60% homologous to each other typically remain hybridized to each other.

Homologs (*i.e.*, nucleic acids encoding ORFX proteins derived from species other than human) or other related sequences (*e.g.*, paralogs) can be obtained by low, moderate or high stringency hybridization with all or a portion of the particular human sequence as a probe using methods well known in the art for nucleic acid hybridization and cloning.

As used herein, the phrase "stringent hybridization conditions" refers to conditions under which a probe, primer or oligonucleotide will hybridize to its target sequence, but to no other sequences. Stringent conditions are sequence-dependent and will be different in different circumstances. Longer sequences hybridize specifically at higher temperatures than shorter sequences. Generally, stringent conditions are selected to be about 5°C lower than the thermal melting point (T_m) for the specific sequence at a defined ionic strength and pH. The T_m is the temperature (under defined ionic strength, pH and nucleic acid concentration) at which 50% of the probes complementary to the target sequence hybridize to the target sequence at equilibrium. Since the target sequences are generally present at excess, at T_m , 50% of the probes are occupied at equilibrium. Typically, stringent conditions will be those in which the salt concentration is less than about 1.0 M sodium ion, typically about 0.01 to 1.0 M sodium ion (or other salts) at pH 7.0 to 8.3 and the temperature is at least about 30°C for short probes, primers or oligonucleotides (e.g., 10 nt to 50 nt) and at least about 60°C for longer probes, primers and oligonucleotides. Stringent conditions may also be achieved with the addition of destabilizing agents, such as formamide.

Stringent conditions are known to those skilled in the art and can be found in CURRENT PROTOCOLS IN MOLECULAR BIOLOGY, John Wiley & Sons, N.Y. (1989), 6.3.1-6.3.6. Preferably, the conditions are such that sequences at least about 65%, 70%, 75%, 85%, 90%, 95%, 98%, or 99% homologous to each other typically remain hybridized to each other. A non-limiting example of stringent hybridization conditions is hybridization in a high salt buffer comprising 6X SSC, 50 mM Tris-HCl (pH 7.5), 1 mM EDTA, 0.02% PVP, 0.02% Ficoll, 0.02% BSA, and 500 mg/ml denatured salmon sperm DNA at 65°C. This hybridization is followed by one or more washes in 0.2X SSC, 0.01% BSA at 50°C. An isolated nucleic acid molecule of the invention that hybridizes under stringent conditions to the sequence of any of SEQ ID NO:2*n*-1 (wherein $n = 1$ to 3161) corresponds to a naturally occurring nucleic acid molecule. As used herein, a "naturally-occurring" nucleic acid molecule refers to an RNA or DNA molecule having a nucleotide sequence that occurs in nature (e.g., encodes a natural protein).

In a second embodiment, a nucleic acid sequence that is hybridizable to the nucleic acid molecule comprising the nucleotide sequence of any of SEQ ID NO:2*n*-1 (wherein $n = 1$ to 3161), or fragments, analogs or derivatives thereof, under conditions of moderate stringency is provided. A non-limiting example of moderate stringency hybridization conditions are

hybridization in 6X SSC, 5X Denhardt's solution, 0.5% SDS and 100 mg/ml denatured salmon sperm DNA at 55°C, followed by one or more washes in 1X SSC, 0.1% SDS at 37°C. Other conditions of moderate stringency that may be used are well known in the art. See, e.g., Ausubel *et al.* (eds.), 1993, CURRENT PROTOCOLS IN MOLECULAR BIOLOGY, John Wiley & Sons, NY, and
5 Kriegler, 1990, GENE TRANSFER AND EXPRESSION, A LABORATORY MANUAL, Stockton Press, NY.

In a third embodiment, a nucleic acid that is hybridizable to the nucleic acid molecule comprising the nucleotide sequence of any of SEQ ID NO:2*n*-1 (wherein *n* = 1 to 3161), or fragments, analogs or derivatives thereof, under conditions of low stringency, is provided. A
10 non-limiting example of low stringency hybridization conditions are hybridization in 35% formamide, 5X SSC, 50 mM Tris-HCl (pH 7.5), 5 mM EDTA, 0.02% PVP, 0.02% Ficoll, 0.2% BSA, 100 mg/ml denatured salmon sperm DNA, 10% (wt/vol) dextran sulfate at 40°C, followed by one or more washes in 2X SSC, 25 mM Tris-HCl (pH 7.4), 5 mM EDTA, and 0.1% SDS at
15 50°C. Other conditions of low stringency that may be used are well known in the art (e.g., as employed for cross-species hybridizations). See, e.g., Ausubel *et al.* (eds.), 1993, CURRENT PROTOCOLS IN MOLECULAR BIOLOGY, John Wiley & Sons, NY, and Kriegler, 1990, GENE TRANSFER AND EXPRESSION, A LABORATORY MANUAL, Stockton Press, NY; Shilo and Weinberg, 1981, *Proc Natl Acad Sci USA* 78: 6789-6792.

Conservative mutations

20 In addition to naturally-occurring allelic variants of the ORFX sequence that may exist in the population, the skilled artisan will further appreciate that changes can be introduced by mutation into the nucleotide sequence of any of SEQ ID NO:2*n*-1 (wherein *n* = 1 to 3161), thereby leading to changes in the amino acid sequence of the encoded ORFX protein, without altering the functional ability of the ORFX protein. For example, nucleotide substitutions
25 leading to amino acid substitutions at "non-essential" amino acid residues can be made in the sequence of any of SEQ ID NO:2*n*-1 (wherein *n* = 1 to 3161). A "non-essential" amino acid residue is a residue that can be altered from the wild-type sequence of ORFX without altering the biological activity, whereas an "essential" amino acid residue is required for biological activity. For example, amino acid residues that are conserved among the ORFX proteins of the present
30 invention, are predicted to be particularly unamenable to alteration.

Amino acid residues that are conserved among members of an ORFX family members are predicted to be less amenable to alteration. For example, an ORFX protein according to the present invention can contain at least one domain (*e.g.*, as shown in Table 1) that is a typically conserved region in an ORFX family member. As such, these conserved domains are not likely to be amenable to mutation. Other amino acid residues, however, (*e.g.*, those that are not conserved or only semi-conserved among members of the ORFX family) may not be as essential for activity and thus are more likely to be amenable to alteration.

Another aspect of the invention pertains to nucleic acid molecules encoding ORFX proteins that contain changes in amino acid residues that are not essential for activity. Such ORFX proteins differ in amino acid sequence from any of any of SEQ ID NO:2 n (wherein $n = 1$ to 3161), yet retain biological activity. In one embodiment, the isolated nucleic acid molecule comprises a nucleotide sequence encoding a protein, wherein the protein comprises an amino acid sequence at least about 75% homologous to the amino acid sequence of any of SEQ ID NO:2 n (wherein $n = 1$ to 3161). Preferably, the protein encoded by the nucleic acid is at least about 80% homologous to any of SEQ ID NO:2 n (wherein $n = 1$ to 3161), more preferably at least about 90%, 95%, 98%, and most preferably at least about 99% homologous to SEQ ID NO:2.

An isolated nucleic acid molecule encoding a ORFX protein homologous to the protein of any of SEQ ID NO:2 n (wherein $n = 1$ to 3161) can be created by introducing one or more nucleotide substitutions, additions or deletions into the corresponding nucleotide sequence, *i.e.* SEQ ID NO:2 n -1 for the corresponding n , such that one or more amino acid substitutions, additions or deletions are introduced into the encoded protein.

Mutations can be introduced into SEQ ID NO:2 n -1 (wherein $n = 1$ to 3161) by standard techniques, such as site-directed mutagenesis and PCR-mediated mutagenesis. Preferably, conservative amino acid substitutions are made at one or more predicted non-essential amino acid residues. A "conservative amino acid substitution" is one in which the amino acid residue is replaced with an amino acid residue having a similar side chain. Families of amino acid residues having similar side chains have been defined in the art. These families include amino acids with basic side chains (*e.g.*, lysine, arginine, histidine), acidic side chains (*e.g.*, aspartic acid, glutamic acid), uncharged polar side chains (*e.g.*, glycine, asparagine, glutamine, serine, threonine, tyrosine, cysteine), nonpolar side chains (*e.g.*, alanine, valine, leucine, isoleucine, proline,

phenylalanine, methionine, tryptophan), beta-branched side chains (*e.g.*, threonine, valine, isoleucine) and aromatic side chains (*e.g.*, tyrosine, phenylalanine, tryptophan, histidine). Thus, a predicted nonessential amino acid residue in ORFX is replaced with another amino acid residue from the same side chain family. Alternatively, in another embodiment, mutations can be introduced randomly along all or part of a ORFX coding sequence, such as by saturation mutagenesis, and the resultant mutants can be screened for ORFX biological activity to identify mutants that retain activity. Following mutagenesis of SEQ ID NO:2*n*-1 (wherein *n* = 1 to 3161), the encoded protein can be expressed by any recombinant technology known in the art and the activity of the protein can be determined.

In one embodiment, a mutant ORFX protein can be assayed for (1) the ability to form protein:protein interactions with other ORFX proteins, other cell-surface proteins, or biologically active portions thereof, (2) complex formation between a mutant ORFX protein and a ORFX receptor; (3) the ability of a mutant ORFX protein to bind to an intracellular target protein or biologically active portion thereof; (*e.g.*, avidin proteins); (4) the ability to bind BRA protein; or (5) the ability to specifically bind an anti-ORFX protein antibody.

Antisense

Another aspect of the invention pertains to isolated antisense nucleic acid molecules that are hybridizable to or complementary to the nucleic acid molecule comprising the nucleotide sequence of SEQ ID NO:2*n*-1 (wherein *n* = 1 to 3161), or fragments, analogs or derivatives thereof. An "antisense" nucleic acid comprises a nucleotide sequence that is complementary to a "sense" nucleic acid encoding a protein, *e.g.*, complementary to the coding strand of a double-stranded cDNA molecule or complementary to an mRNA sequence. In specific aspects, antisense nucleic acid molecules are provided that comprise a sequence complementary to at least about 10, 25, 50, 100, 250 or 500 nucleotides or an entire ORFX coding strand, or to only a portion thereof. Nucleic acid molecules encoding fragments, homologs, derivatives and analogs of a ORFX protein of any of SEQ ID NO:2*n* (wherein *n* = 1 to 3161) or antisense nucleic acids complementary to a ORFX nucleic acid sequence of SEQ ID NO:2*n*-1 (wherein *n* = 1 to 3161) are additionally provided.

In one embodiment, an antisense nucleic acid molecule is antisense to a "coding region" of the coding strand of a nucleotide sequence encoding ORFX. The term "coding region" refers to the region of the nucleotide sequence comprising codons which are translated into amino acid

residues (*e.g.*, the protein coding region of a human ORFX that corresponds to any of SEQ ID NO:2*n* (wherein *n* = 1 to 3161)). In another embodiment, the antisense nucleic acid molecule is antisense to a "noncoding region" of the coding strand of a nucleotide sequence encoding ORFX. The term "noncoding region" refers to 5' and 3' sequences which flank the coding region that are not translated into amino acids (*i.e.*, also referred to as 5' and 3' untranslated regions).

Given the coding strand sequences encoding ORFX disclosed herein (*e.g.*, SEQ ID NO:2*n*-1 (wherein *n* = 1 to 3161)), antisense nucleic acids of the invention can be designed according to the rules of Watson and Crick or Hoogsteen base pairing. The antisense nucleic acid molecule can be complementary to the entire coding region of ORFX mRNA, but more preferably is an oligonucleotide that is antisense to only a portion of the coding or noncoding region of ORFX mRNA. For example, the antisense oligonucleotide can be complementary to the region surrounding the translation start site of ORFX mRNA. An antisense oligonucleotide can be, for example, about 5, 10, 15, 20, 25, 30, 35, 40, 45 or 50 nucleotides in length. An antisense nucleic acid of the invention can be constructed using chemical synthesis or enzymatic ligation reactions using procedures known in the art. For example, an antisense nucleic acid (*e.g.*, an antisense oligonucleotide) can be chemically synthesized using naturally occurring nucleotides or variously modified nucleotides designed to increase the biological stability of the molecules or to increase the physical stability of the duplex formed between the antisense and sense nucleic acids, *e.g.*, phosphorothioate derivatives and acridine substituted nucleotides can be used.

Examples of modified nucleotides that can be used to generate the antisense nucleic acid include: 5-fluorouracil, 5-bromouracil, 5-chlorouracil, 5-iodouracil, hypoxanthine, xanthine, 4-acetylcytosine, 5-(carboxyhydroxymethyl) uracil, 5-carboxymethylaminomethyl-2-thiouridine, 5-carboxymethylaminomethyluracil, dihydrouracil, beta-D-galactosylqueosine, inosine, N6-isopentenyladenine, 1-methylguanine, 1-methylinosine, 2,2-dimethylguanine, 2-methyladenine, 2-methylguanine, 3-methylcytosine, 5-methylcytosine, N6-adenine, 7-methylguanine, 5-methylaminomethyluracil, 5-methoxyaminomethyl-2-thiouracil, beta-D-mannosylqueosine, 5'-methoxycarboxymethyluracil, 5-methoxyuracil, 2-methylthio-N6-isopentenyladenine, uracil-5-oxyacetic acid (*v*), wybutoxosine, pseudouracil, queosine, 2-thiocytosine, 5-methyl-2-thiouracil, 2-thiouracil, 4-thiouracil, 5-methyluracil, uracil-5-oxyacetic acid methylester, uracil-5-oxyacetic acid (*v*), 5-methyl-2-thiouracil,

3-(3-amino-3-N-2-carboxypropyl) uracil, (acp3)w, and 2,6-diaminopurine. Alternatively, the antisense nucleic acid can be produced biologically using an expression vector into which a nucleic acid has been subcloned in an antisense orientation (*i.e.*, RNA transcribed from the inserted nucleic acid will be of an antisense orientation to a target nucleic acid of interest, described further in the following subsection).

The antisense nucleic acid molecules of the invention are typically administered to a subject or generated *in situ* such that they hybridize with or bind to cellular mRNA and/or genomic DNA encoding a ORFX protein to thereby inhibit expression of the protein, *e.g.*, by inhibiting transcription and/or translation. The hybridization can be by conventional nucleotide complementarity to form a stable duplex, or, for example, in the case of an antisense nucleic acid molecule that binds to DNA duplexes, through specific interactions in the major groove of the double helix. An example of a route of administration of antisense nucleic acid molecules of the invention includes direct injection at a tissue site. Alternatively, antisense nucleic acid molecules can be modified to target selected cells and then administered systemically. For example, for systemic administration, antisense molecules can be modified such that they specifically bind to receptors or antigens expressed on a selected cell surface, *e.g.*, by linking the antisense nucleic acid molecules to peptides or antibodies that bind to cell surface receptors or antigens. The antisense nucleic acid molecules can also be delivered to cells using the vectors described herein. To achieve sufficient intracellular concentrations of antisense molecules, vector constructs in which the antisense nucleic acid molecule is placed under the control of a strong pol II or pol III promoter are preferred.

In yet another embodiment, the antisense nucleic acid molecule of the invention is an α -anomeric nucleic acid molecule. An α -anomeric nucleic acid molecule forms specific double-stranded hybrids with complementary RNA in which, contrary to the usual β -units, the strands run parallel to each other (Gaultier *et al.* (1987) *Nucleic Acids Res* 15: 6625-6641). The antisense nucleic acid molecule can also comprise a 2'-o-methylribonucleotide (Inoue *et al.* (1987) *Nucleic Acids Res* 15: 6131-6148) or a chimeric RNA-DNA analogue (Inoue *et al.* (1987) *FEBS Lett* 215: 327-330).

Ribozymes and PNA moieties

Such modifications include, by way of nonlimiting example, modified bases, and nucleic acids whose sugar phosphate backbones are modified or derivatized. These modifications are

carried out at least in part to enhance the chemical stability of the modified nucleic acid, such that they may be used, for example, as antisense binding nucleic acids in therapeutic applications in a subject.

In still another embodiment, an antisense nucleic acid of the invention is a ribozyme.

- 5 Ribozymes are catalytic RNA molecules with ribonuclease activity that are capable of cleaving a single-stranded nucleic acid, such as an mRNA, to which they have a complementary region. Thus, ribozymes (*e.g.*, hammerhead ribozymes (described in Haselhoff and Gerlach (1988) *Nature* 334:585-591)) can be used to catalytically cleave ORFX mRNA transcripts to thereby inhibit translation of ORFX mRNA. A ribozyme having specificity for a ORFX-encoding
- 10 nucleic acid can be designed based upon the nucleotide sequence of a ORFX DNA disclosed herein (*i.e.*, SEQ ID NO:2*n*-1 (wherein *n* = 1 to 3161)). For example, a derivative of a Tetrahymena L-19 IVS RNA can be constructed in which the nucleotide sequence of the active site is complementary to the nucleotide sequence to be cleaved in a ORFX-encoding mRNA. See, *e.g.*, Cech *et al.* U.S. Pat. No. 4,987,071; and Cech *et al.* U.S. Pat. No. 5,116,742.
- 15 Alternatively, ORFX mRNA can be used to select a catalytic RNA having a specific ribonuclease activity from a pool of RNA molecules. See, *e.g.*, Bartel *et al.*, (1993) *Science* 261:1411-1418.

- Alternatively, ORFX gene expression can be inhibited by targeting nucleotide sequences complementary to the regulatory region of the ORFX (*e.g.*, the ORFX promoter and/or
- 20 enhancers) to form triple helical structures that prevent transcription of the ORFX gene in target cells. See generally, Helene. (1991) *Anticancer Drug Des.* 6: 569-84; Helene. *et al.* (1992) *Ann. N.Y. Acad. Sci.* 660:27-36; and Maher (1992) *Bioassays* 14: 807-15.

- In various embodiments, the nucleic acids of ORFX can be modified at the base moiety, sugar moiety or phosphate backbone to improve, *e.g.*, the stability, hybridization, or solubility of
- 25 the molecule. For example, the deoxyribose phosphate backbone of the nucleic acids can be modified to generate peptide nucleic acids (see Hyrup *et al.* (1996) *Bioorg Med Chem* 4: 5-23). As used herein, the terms "peptide nucleic acids" or "PNAs" refer to nucleic acid mimics, *e.g.*, DNA mimics, in which the deoxyribose phosphate backbone is replaced by a pseudopeptide backbone and only the four natural nucleobases are retained. The neutral backbone of PNAs has
- 30 been shown to allow for specific hybridization to DNA and RNA under conditions of low ionic strength. The synthesis of PNA oligomers can be performed using standard solid phase peptide

synthesis protocols as described in Hyrup *et al.* (1996) above; Perry-O'Keefe *et al.* (1996) *PNAS* 93: 14670-675.

PNAs of ORFX can be used in therapeutic and diagnostic applications. For example, PNAs can be used as antisense or antigene agents for sequence-specific modulation of gene expression by, *e.g.*, inducing transcription or translation arrest or inhibiting replication. PNAs of ORFX can also be used, *e.g.*, in the analysis of single base pair mutations in a gene by, *e.g.*, PNA directed PCR clamping; as artificial restriction enzymes when used in combination with other enzymes, *e.g.*, S1 nucleases (Hyrup B. (1996) above); or as probes or primers for DNA sequence and hybridization (Hyrup *et al.* (1996), above; Perry-O'Keefe (1996), above).

In another embodiment, PNAs of ORFX can be modified, *e.g.*, to enhance their stability or cellular uptake, by attaching lipophilic or other helper groups to PNA, by the formation of PNA-DNA chimeras, or by the use of liposomes or other techniques of drug delivery known in the art. For example, PNA-DNA chimeras of ORFX can be generated that may combine the advantageous properties of PNA and DNA. Such chimeras allow DNA recognition enzymes, *e.g.*, RNase H and DNA polymerases, to interact with the DNA portion while the PNA portion would provide high binding affinity and specificity. PNA-DNA chimeras can be linked using linkers of appropriate lengths selected in terms of base stacking, number of bonds between the nucleobases, and orientation (Hyrup (1996) above). The synthesis of PNA-DNA chimeras can be performed as described in Hyrup (1996) above and Finn *et al.* (1996) *Nucl Acids Res* 24: 3357-63. For example, a DNA chain can be synthesized on a solid support using standard phosphoramidite coupling chemistry, and modified nucleoside analogs, *e.g.*, 5'-(4-methoxytrityl)amino-5'-deoxy-thymidine phosphoramidite, can be used between the PNA and the 5' end of DNA (Mag *et al.* (1989) *Nucl Acid Res* 17: 5973-88). PNA monomers are then coupled in a stepwise manner to produce a chimeric molecule with a 5' PNA segment and a 3' DNA segment (Finn *et al.* (1996) above). Alternatively, chimeric molecules can be synthesized with a 5' DNA segment and a 3' PNA segment. See, Petersen *et al.* (1975) *Bioorg Med Chem Lett* 5: 1119-11124.

In other embodiments, the oligonucleotide may include other appended groups such as peptides (*e.g.*, for targeting host cell receptors *in vivo*), or agents facilitating transport across the cell membrane (see, *e.g.*, Letsinger *et al.*, 1989, *Proc. Natl. Acad. Sci. U.S.A.* 86:6553-6556; Lemaitre *et al.*, 1987, *Proc. Natl. Acad. Sci.* 84:648-652; PCT Publication No. W088/09810) or

the blood-brain barrier (see, *e.g.*, PCT Publication No. W089/10134). In addition, oligonucleotides can be modified with hybridization triggered cleavage agents (See, *e.g.*, Krol *et al.*, 1988, *BioTechniques* 6:958-976) or intercalating agents. (See, *e.g.*, Zon, 1988, *Pharm. Res.* 5: 539-549). To this end, the oligonucleotide may be conjugated to another molecule, *e.g.*, a peptide, a hybridization triggered cross-linking agent, a transport agent, a hybridization-triggered cleavage agent, etc.

ORFX polypeptides

The novel protein of the invention includes the ORFX-like protein whose sequence is provided in any of SEQ ID NO:2*n* (wherein *n* = 1 to 3161). The invention also includes a mutant or variant protein any of whose residues may be changed from the corresponding residue shown in FIG. 1 while still encoding a protein that maintains its ORFX-like activities and physiological functions, or a functional fragment thereof. For example, the invention includes the polypeptides encoded by the variant ORFX nucleic acids described above. In the mutant or variant protein, up to 20% or more of the residues may be so changed.

In general, an ORFX-like variant that preserves ORFX-like function includes any variant in which residues at a particular position in the sequence have been substituted by other amino acids, and further include the possibility of inserting an additional residue or residues between two residues of the parent protein as well as the possibility of deleting one or more residues from the parent sequence. Any amino acid substitution, insertion, or deletion is encompassed by the invention. In favorable circumstances, the substitution is a conservative substitution as defined above. Furthermore, without limiting the scope of the invention, positions of any of SEQ ID NO:2*n* (wherein *n* = 1 to 3161) may be substituted such that a mutant or variant protein may include one or more substitutions

The invention also includes isolated ORFX proteins, and biologically active portions thereof, or derivatives, fragments, analogs or homologs thereof. Also provided are polypeptide fragments suitable for use as immunogens to raise anti-ORFX antibodies. In one embodiment, native ORFX proteins can be isolated from cells or tissue sources by an appropriate purification scheme using standard protein purification techniques. In another embodiment, ORFX proteins are produced by recombinant DNA techniques. Alternative to recombinant expression, a ORFX

protein or polypeptide can be synthesized chemically using standard peptide synthesis techniques.

An "isolated" or "purified" protein or biologically active portion thereof is substantially free of cellular material or other contaminating proteins from the cell or tissue source from which the ORFX protein is derived, or substantially free from chemical precursors or other chemicals when chemically synthesized. The language "substantially free of cellular material" includes preparations of ORFX protein in which the protein is separated from cellular components of the cells from which it is isolated or recombinantly produced. In one embodiment, the language "substantially free of cellular material" includes preparations of ORFX protein having less than about 30% (by dry weight) of non-ORFX protein (also referred to herein as a "contaminating protein"), more preferably less than about 20% of non-ORFX protein, still more preferably less than about 10% of non-ORFX protein, and most preferably less than about 5% non-ORFX protein. When the ORFX protein or biologically active portion thereof is recombinantly produced, it is also preferably substantially free of culture medium, *i.e.*, culture medium represents less than about 20%, more preferably less than about 10%, and most preferably less than about 5% of the volume of the protein preparation.

The language "substantially free of chemical precursors or other chemicals" includes preparations of ORFX protein in which the protein is separated from chemical precursors or other chemicals that are involved in the synthesis of the protein. In one embodiment, the language "substantially free of chemical precursors or other chemicals" includes preparations of ORFX protein having less than about 30% (by dry weight) of chemical precursors or non-ORFX chemicals, more preferably less than about 20% chemical precursors or non-ORFX chemicals, still more preferably less than about 10% chemical precursors or non-ORFX chemicals, and most preferably less than about 5% chemical precursors or non-ORFX chemicals.

Biologically active portions of a ORFX protein include peptides comprising amino acid sequences sufficiently homologous to or derived from the amino acid sequence of the ORFX protein, *e.g.*, the amino acid sequence shown in SEQ ID NO:2 that include fewer amino acids than the full length ORFX proteins, and exhibit at least one activity of a ORFX protein. Typically, biologically active portions comprise a domain or motif with at least one activity of the ORFX protein. A biologically active portion of a ORFX protein can be a polypeptide which is, for example, 10, 25, 50, 100 or more amino acids in length.

A biologically active portion of a ORFX protein of the present invention may contain at least one of the above-identified domains conserved between the FGF family of proteins. Moreover, other biologically active portions, in which other regions of the protein are deleted, can be prepared by recombinant techniques and evaluated for one or more of the functional activities of a native ORFX protein.

In an embodiment, the ORFX protein has an amino acid sequence shown in any of SEQ ID NO:2n (wherein n = 1 to 3161). In other embodiments, the ORFX protein is substantially homologous to any of SEQ ID NO:2n (wherein n = 1 to 3161) and retains the functional activity of the protein of any of SEQ ID NO:2n (wherein n = 1 to 3161), yet differs in amino acid sequence due to natural allelic variation or mutagenesis, as described in detail below.

Accordingly, in another embodiment, the ORFX protein is a protein that comprises an amino acid sequence at least about 45% homologous, and more preferably about 55, 65, 70, 75, 80, 85, 90, 95, 98 or even 99% homologous to the amino acid sequence of any of SEQ ID NO:2n (wherein n = 1 to 3161) and retains the functional activity of the ORFX proteins of the corresponding polypeptide having the sequence of SEQ ID NO:2n (wherein n = 1 to 3161).

Determining homology between two or more sequences

To determine the percent homology of two amino acid sequences or of two nucleic acids, the sequences are aligned for optimal comparison purposes (e.g., gaps can be introduced in either of the sequences being compared for optimal alignment between the sequences). The amino acid residues or nucleotides at corresponding amino acid positions or nucleotide positions are then compared. When a position in the first sequence is occupied by the same amino acid residue or nucleotide as the corresponding position in the second sequence, then the molecules are homologous at that position (*i.e.*, as used herein amino acid or nucleic acid "homology" is equivalent to amino acid or nucleic acid "identity").

The nucleic acid sequence homology may be determined as the degree of identity between two sequences. The homology may be determined using computer programs known in the art, such as GAP software provided in the GCG program package. See, *Needleman and Wunsch 1970 J Mol Biol* 48: 443-453. Using GCG GAP software with the following settings for nucleic acid sequence comparison: GAP creation penalty of 5.0 and GAP extension penalty of 0.3, the coding region of the analogous nucleic acid sequences referred to above exhibits a

degree of identity preferably of at least 70%, 75%, 80%, 85%, 90%, 95%, 98%, or 99%, with the CDS (encoding) part of the DNA sequence shown in SEQ ID NO:2 n -1 (wherein $n = 1$ to 3161).

The term "sequence identity" refers to the degree to which two polynucleotide or polypeptide sequences are identical on a residue-by-residue basis over a particular region of comparison. The term "percentage of sequence identity" is calculated by comparing two optimally aligned sequences over that region of comparison, determining the number of positions at which the identical nucleic acid base (*e.g.*, A, T, C, G, U, or I, in the case of nucleic acids) occurs in both sequences to yield the number of matched positions, dividing the number of matched positions by the total number of positions in the region of comparison (*i.e.*, the window size), and multiplying the result by 100 to yield the percentage of sequence identity. The term "substantial identity" as used herein denotes a characteristic of a polynucleotide sequence, wherein the polynucleotide comprises a sequence that has at least 80 percent sequence identity, preferably at least 85 percent identity and often 90 to 95 percent sequence identity, more usually at least 99 percent sequence identity as compared to a reference sequence over a comparison region. The term "percentage of positive residues" is calculated by comparing two optimally aligned sequences over that region of comparison, determining the number of positions at which the identical and conservative amino acid substitutions, as defined above, occur in both sequences to yield the number of matched positions, dividing the number of matched positions by the total number of positions in the region of comparison (*i.e.*, the window size), and multiplying the result by 100 to yield the percentage of positive residues.

Chimeric and fusion proteins

The invention also provides ORFX chimeric or fusion proteins. As used herein, a ORFX "chimeric protein" or "fusion protein" includes a ORFX polypeptide operatively linked to a non-ORFX polypeptide. A "ORFX polypeptide" refers to a polypeptide having an amino acid sequence corresponding to ORFX, whereas a "non-ORFX polypeptide" refers to a polypeptide having an amino acid sequence corresponding to a protein that is not substantially homologous to the ORFX protein, *e.g.*, a protein that is different from the ORFX protein and that is derived from the same or a different organism. Within a ORFX fusion protein the ORFX polypeptide can correspond to all or a portion of a ORFX protein. In one embodiment, a ORFX fusion protein comprises at least one biologically active portion of a ORFX protein. In another embodiment, a ORFX fusion protein comprises at least two biologically active portions of a

ORFX protein. Within the fusion protein, the term "operatively linked" is intended to indicate that the ORFX polypeptide and the non-ORFX polypeptide are fused in-frame to each other. The non-ORFX polypeptide can be fused to the N-terminus or C-terminus of the ORFX polypeptide.

5 For example, in one embodiment a ORFX fusion protein comprises a ORFX polypeptide operably linked to the extracellular domain of a second protein. Such fusion proteins can be further utilized in screening assays for compounds that modulate ORFX activity (such assays are described in detail below).

10 In another embodiment, the fusion protein is a GST-ORFX fusion protein in which the ORFX sequences are fused to the C-terminus of the GST (i.e., glutathione S-transferase) sequences. Such fusion proteins can facilitate the purification of recombinant ORFX.

In yet another embodiment, the fusion protein is a ORFX protein containing a heterologous signal sequence at its N-terminus. For example, the native ORFX signal sequence can be removed and replaced with a signal sequence from another protein. In certain host cells
15 (e.g., mammalian host cells), expression and/or secretion of ORFX can be increased through use of a heterologous signal sequence.

In another embodiment, the fusion protein is a ORFX-immunoglobulin fusion protein in which the ORFX sequences comprising one or more domains are fused to sequences derived from a member of the immunoglobulin protein family. The ORFX-immunoglobulin fusion
20 proteins of the invention can be incorporated into pharmaceutical compositions and administered to a subject to inhibit an interaction between a ORFX ligand and a ORFX protein on the surface of a cell, to thereby suppress ORFX-mediated signal transduction *in vivo*. In one nonlimiting example, a contemplated ORFX ligand of the invention is an ORFX receptor. The ORFX-immunoglobulin fusion proteins can be used to modulate the bioavailability of a ORFX
25 cognate ligand. Inhibition of the ORFX ligand/ORFX interaction may be useful therapeutically for both the treatment of proliferative and differentiative disorders, as well as modulating (e.g., promoting or inhibiting) cell survival. Moreover, the ORFX-immunoglobulin fusion proteins of the invention can be used as immunogens to produce anti-ORFX antibodies in a subject, to purify ORFX ligands, and in screening assays to identify molecules that inhibit the interaction of
30 ORFX with a ORFX ligand.

A ORFX chimeric or fusion protein of the invention can be produced by standard recombinant DNA techniques. For example, DNA fragments coding for the different polypeptide sequences are ligated together in-frame in accordance with conventional techniques, *e.g.*, by employing blunt-ended or stagger-ended termini for ligation, restriction enzyme digestion to provide for appropriate termini, filling-in of cohesive ends as appropriate, alkaline phosphatase treatment to avoid undesirable joining, and enzymatic ligation. In another embodiment, the fusion gene can be synthesized by conventional techniques including automated DNA synthesizers. Alternatively, PCR amplification of gene fragments can be carried out using anchor primers that give rise to complementary overhangs between two consecutive gene fragments that can subsequently be annealed and reamplified to generate a chimeric gene sequence (see, for example, Ausubel et al. (eds.) *CURRENT PROTOCOLS IN MOLECULAR BIOLOGY*, John Wiley & Sons, 1992). Moreover, many expression vectors are commercially available that already encode a fusion moiety (*e.g.*, a GST polypeptide). A ORFX-encoding nucleic acid can be cloned into such an expression vector such that the fusion moiety is linked in-frame to the ORFX protein.

ORFX agonists and antagonists

The present invention also pertains to variants of the ORFX proteins that function as either ORFX agonists (mimetics) or as ORFX antagonists. Variants of the ORFX protein can be generated by mutagenesis, *e.g.*, discrete point mutation or truncation of the ORFX protein. An agonist of the ORFX protein can retain substantially the same, or a subset of, the biological activities of the naturally occurring form of the ORFX protein. An antagonist of the ORFX protein can inhibit one or more of the activities of the naturally occurring form of the ORFX protein by, for example, competitively binding to a downstream or upstream member of a cellular signaling cascade which includes the ORFX protein. Thus, specific biological effects can be elicited by treatment with a variant of limited function. In one embodiment, treatment of a subject with a variant having a subset of the biological activities of the naturally occurring form of the protein has fewer side effects in a subject relative to treatment with the naturally occurring form of the ORFX proteins.

Variants of the ORFX protein that function as either ORFX agonists (mimetics) or as ORFX antagonists can be identified by screening combinatorial libraries of mutants, *e.g.*, truncation mutants, of the ORFX protein for ORFX protein agonist or antagonist activity. In one

embodiment, a variegated library of ORFX variants is generated by combinatorial mutagenesis at the nucleic acid level and is encoded by a variegated gene library. A variegated library of ORFX variants can be produced by, for example, enzymatically ligating a mixture of synthetic oligonucleotides into gene sequences such that a degenerate set of potential ORFX sequences is expressible as individual polypeptides, or alternatively, as a set of larger fusion proteins (*e.g.*, for phage display) containing the set of ORFX sequences therein. There are a variety of methods which can be used to produce libraries of potential ORFX variants from a degenerate oligonucleotide sequence. Chemical synthesis of a degenerate gene sequence can be performed in an automatic DNA synthesizer, and the synthetic gene then ligated into an appropriate expression vector. Use of a degenerate set of genes allows for the provision, in one mixture, of all of the sequences encoding the desired set of potential ORFX sequences. Methods for synthesizing degenerate oligonucleotides are known in the art (see, *e.g.*, Narang (1983) *Tetrahedron* 39:3; Itakura *et al.* (1984) *Annu Rev Biochem* 53:323; Itakura *et al.* (1984) *Science* 198:1056; Ike *et al.* (1983) *Nucl Acid Res* 11:477.

Polypeptide libraries

In addition, libraries of fragments of the ORFX protein coding sequence can be used to generate a variegated population of ORFX fragments for screening and subsequent selection of variants of a ORFX protein. In one embodiment, a library of coding sequence fragments can be generated by treating a double stranded PCR fragment of a ORFX coding sequence with a nuclease under conditions wherein nicking occurs only about once per molecule, denaturing the double stranded DNA, renaturing the DNA to form double stranded DNA that can include sense/antisense pairs from different nicked products, removing single stranded portions from reformed duplexes by treatment with S1 nuclease, and ligating the resulting fragment library into an expression vector. By this method, an expression library can be derived which encodes N-terminal and internal fragments of various sizes of the ORFX protein.

Several techniques are known in the art for screening gene products of combinatorial libraries made by point mutations or truncation, and for screening cDNA libraries for gene products having a selected property. Such techniques are adaptable for rapid screening of the gene libraries generated by the combinatorial mutagenesis of ORFX proteins. The most widely used techniques, which are amenable to high throughput analysis, for screening large gene libraries typically include cloning the gene library into replicable expression vectors,

transforming appropriate cells with the resulting library of vectors, and expressing the combinatorial genes under conditions in which detection of a desired activity facilitates isolation of the vector encoding the gene whose product was detected. Recursive ensemble mutagenesis (REM), a new technique that enhances the frequency of functional mutants in the libraries, can be used in combination with the screening assays to identify ORFX variants (Arkin and Yourvan (1992) PNAS 89:7811-7815; Delgrave *et al.* (1993) Protein Engineering 6:327-331).

Anti-ORFX Antibodies

The invention further encompasses antibodies and antibody fragments, such as F_{ab} or $(F_{ab})_2$, that bind immunospecifically to any of the proteins of the invention.

An isolated ORFX protein, or a portion or fragment thereof, can be used as an immunogen to generate antibodies that bind ORFX using standard techniques for polyclonal and monoclonal antibody preparation. Full-length ORFX protein can be used. Alternatively, the invention provides antigenic peptide fragments of ORFX for use as immunogens. The antigenic peptide of ORFX comprises at least 4 amino acid residues of the amino acid sequence shown in any of SEQ ID NO:2*n* (wherein *n* = 1 to 3161). The antigenic peptide encompasses an epitope of ORFX such that an antibody raised against the peptide forms a specific immune complex with ORFX. The antigenic peptide may comprise at least 6 aa residues, at least 8 aa residues, at least 10 aa residues, at least 15 aa residues, at least 20 aa residues, or at least 30 aa residues. In one embodiment of the invention, the antigenic peptide comprises a polypeptide comprising at least 6 contiguous amino acids of any of SEQ ID NO:2*n* (wherein *n* = 1 to 3161).

In an embodiment of the invention, epitopes encompassed by the antigenic peptide are regions of ORFX that are located on the surface of the protein, *e.g.*, hydrophilic regions. As a means for targeting antibody production, hydropathy plots showing regions of hydrophilicity and hydrophobicity may be generated by any method well known in the art, including, for example, the Kyte Doolittle or the Hopp Woods methods, either with or without Fourier transformation. See, *e.g.*, Hopp and Woods, 1981, Proc. Nat. Acad. Sci. USA 78: 3824-3828; Kyte and Doolittle 1982, J. Mol. Biol. 157: 105-142, each incorporated herein by reference in their entirety.

As disclosed herein, an ORFX protein sequence of any of SEQ ID NO:2*n* (wherein *n* = 1 to 3161), or derivatives, fragments, analogs or homologs thereof, may be utilized as immunogens in the generation of antibodies that immunospecifically-bind these protein components. The term "antibody" as used herein refers to immunoglobulin molecules and

immunologically active portions of immunoglobulin molecules, i.e., molecules that contain an antigen binding site that specifically binds (immunoreacts with) an antigen, such as ORFX. Such antibodies include, but are not limited to, polyclonal, monoclonal, chimeric, single chain, F_{ab} and $F_{(ab)_2}$ fragments, and an F_{ab} expression library. In a specific embodiment, antibodies to human ORFX proteins are disclosed. Various procedures known within the art may be used for the production of polyclonal or monoclonal antibodies to a ORFX protein sequence of any of SEQ ID NO:2n (wherein $n = 1$ to 3161) or derivative, fragment, analog or homolog thereof. Some of these proteins are discussed below.

For the production of polyclonal antibodies, various suitable host animals (e.g., rabbit, goat, mouse or other mammal) may be immunized by injection with the native protein, or a synthetic variant thereof, or a derivative of the foregoing. An appropriate immunogenic preparation can contain, for example, recombinantly expressed ORFX protein or a chemically synthesized ORFX polypeptide. The preparation can further include an adjuvant. Various adjuvants used to increase the immunological response include, but are not limited to, Freund's (complete and incomplete), mineral gels (e.g., aluminum hydroxide), surface active substances (e.g., lysolecithin, pluronic polyols, polyanions, peptides, oil emulsions, dinitrophenol, etc.), human adjuvants such as *Bacille Calmette-Guerin* and *Corynebacterium parvum*, or similar immunostimulatory agents. If desired, the antibody molecules directed against ORFX can be isolated from the mammal (e.g., from the blood) and further purified by well known techniques, such as protein A chromatography to obtain the IgG fraction.

The term "monoclonal antibody" or "monoclonal antibody composition", as used herein, refers to a population of antibody molecules that contain only one species of an antigen binding site capable of immunoreacting with a particular epitope of ORFX. A monoclonal antibody composition thus typically displays a single binding affinity for a particular ORFX protein with which it immunoreacts. For preparation of monoclonal antibodies directed towards a particular ORFX protein, or derivatives, fragments, analogs or homologs thereof, any technique that provides for the production of antibody molecules by continuous cell line culture may be utilized. Such techniques include, but are not limited to, the hybridoma technique (see Kohler & Milstein, 1975 *Nature* 256: 495-497); the trioma technique; the human B-cell hybridoma technique (see Kozbor, *et al.*, 1983 *Immunol Today* 4: 72) and the EBV hybridoma technique to produce human monoclonal antibodies (see Cole, *et al.*, 1985 In: MONOCLONAL ANTIBODIES AND

CANCER THERAPY, Alan R. Liss, Inc., pp. 77-96). Human monoclonal antibodies may be utilized in the practice of the present invention and may be produced by using human hybridomas (see Cote, *et al.*, 1983. *Proc Natl Acad Sci USA* 80: 2026-2030) or by transforming human B-cells with Epstein Barr Virus *in vitro* (see Cole, *et al.*, 1985 In: MONOCLONAL ANTIBODIES AND
5 CANCER THERAPY, Alan R. Liss, Inc., pp. 77-96). Each of the above citations are incorporated herein by reference in their entirety

According to the invention, techniques can be adapted for the production of single-chain antibodies specific to a ORFX protein (see *e.g.*, U.S. Patent No. 4,946,778). In addition, methods can be adapted for the construction of F_{ab} expression libraries (see *e.g.*, Huse, *et al.*,
10 1989 *Science* 246: 1275-1281) to allow rapid and effective identification of monoclonal F_{ab} fragments with the desired specificity for a ORFX protein or derivatives, fragments, analogs or homologs thereof. Non-human antibodies can be "humanized" by techniques well known in the art. See *e.g.*, U.S. Patent No. 5,225,539. Each of the above citations are incorporated herein by reference. Antibody fragments that contain the idiotypes to a ORFX protein may be produced by
15 techniques known in the art including, but not limited to: (i) an F_{(ab)₂} fragment produced by pepsin digestion of an antibody molecule; (ii) an F_{ab} fragment generated by reducing the disulfide bridges of an F_{(ab)₂} fragment; (iii) an F_{ab} fragment generated by the treatment of the antibody molecule with papain and a reducing agent and (iv) F_v fragments.

Additionally, recombinant anti-ORFX antibodies, such as chimeric and humanized
20 monoclonal antibodies, comprising both human and non-human portions, which can be made using standard recombinant DNA techniques, are within the scope of the invention. Such chimeric and humanized monoclonal antibodies can be produced by recombinant DNA techniques known in the art; for example using methods described in PCT International Application No. PCT/US86/02269; European Patent Application No. 184,187; European Patent
25 Application No. 171,496; European Patent Application No. 173,494; PCT International Publication No. WO 86/01533; U.S. Pat. No. 4,816,567; European Patent Application No. 125,023; Better *et al.* (1988) *Science* 240:1041-1043; Liu *et al.* (1987) *PNAS* 84:3439-3443; Liu *et al.* (1987) *J Immunol.* 139:3521-3526; Sun *et al.* (1987) *PNAS* 84:214-218; Nishimura *et al.* (1987) *Cancer Res* 47:999-1005; Wood *et al.* (1985) *Nature* 314:446-449; Shaw *et al.* (1988), *J. Natl Cancer Inst* 80:1553-1559; Morrison (1985) *Science* 229:1202-1207; Oi *et al.* (1986) *BioTechniques* 4:214; U.S. Pat. No. 5,225,539; Jones *et al.* (1986) *Nature* 321:552-525;

Verhoeyan *et al.* (1988) *Science* 239:1534; and Beidler *et al.* (1988) *J Immunol* 141:4053-4060.

Each of the above citations are incorporated herein by reference.

In one embodiment, methods for the screening of antibodies that possess the desired specificity include, but are not limited to, enzyme-linked immunosorbent assay (ELISA) and
5 other immunologically-mediated techniques known within the art. In a specific embodiment, selection of antibodies that are specific to a particular domain of a ORFX protein is facilitated by generation of hybridomas that bind to the fragment of a ORFX protein possessing such a domain. Antibodies that are specific for one or more domains within a ORFX protein, *e.g.*, the domain spanning the first fifty amino-terminal residues specific to ORFX when compared to FGF-9, or
10 derivatives, fragments, analogs or homologs thereof, are also provided herein.

Anti-ORFX antibodies may be used in methods known within the art relating to the localization and/or quantitation of a ORFX protein (*e.g.*, for use in measuring levels of the ORFX protein within appropriate physiological samples, for use in diagnostic methods, for use in imaging the protein, and the like). In a given embodiment, antibodies for ORFX proteins, or
15 derivatives, fragments, analogs or homologs thereof, that contain the antibody derived binding domain, are utilized as pharmacologically-active compounds [hereinafter "Therapeutics"].

An anti-ORFX antibody (*e.g.*, monoclonal antibody) can be used to isolate ORFX by standard techniques, such as affinity chromatography or immunoprecipitation. An anti-ORFX antibody can facilitate the purification of natural ORFX from cells and of recombinantly
20 produced ORFX expressed in host cells. Moreover, an anti-ORFX antibody can be used to detect ORFX protein (*e.g.*, in a cellular lysate or cell supernatant) in order to evaluate the abundance and pattern of expression of the ORFX protein. Anti-ORFX antibodies can be used diagnostically to monitor protein levels in tissue as part of a clinical testing procedure, *e.g.*, to, for example, determine the efficacy of a given treatment regimen. Detection can be facilitated
25 by coupling (*i.e.*, physically linking) the antibody to a detectable substance. Examples of detectable substances include various enzymes, prosthetic groups, fluorescent materials, luminescent materials, bioluminescent materials, and radioactive materials. Examples of suitable enzymes include horseradish peroxidase, alkaline phosphatase, β -galactosidase, or acetylcholinesterase; examples of suitable prosthetic group complexes include streptavidin/biotin
30 and avidin/biotin; examples of suitable fluorescent materials include umbelliferone, fluorescein, fluorescein isothiocyanate, rhodamine, dichlorotriazinylamine fluorescein, dansyl chloride or

phycoerythrin; an example of a luminescent material includes luminol; examples of bioluminescent materials include luciferase, luciferin, and aequorin, and examples of suitable radioactive material include ^{125}I , ^{131}I , ^{35}S or ^3H .

ORFX Recombinant Vectors and Host Cells

5 Another aspect of the invention pertains to vectors, preferably expression vectors, containing a nucleic acid encoding ORFX protein, or derivatives, fragments, analogs or homologs thereof. As used herein, the term "vector" refers to a nucleic acid molecule capable of transporting another nucleic acid to which it has been linked. One type of vector is a "plasmid", which refers to a circular double stranded DNA loop into which additional DNA segments can
10 be ligated. Another type of vector is a viral vector, wherein additional DNA segments can be ligated into the viral genome. Certain vectors are capable of autonomous replication in a host cell into which they are introduced (*e.g.*, bacterial vectors having a bacterial origin of replication and episomal mammalian vectors). Other vectors (*e.g.*, non-episomal mammalian vectors) are integrated into the genome of a host cell upon introduction into the host cell, and thereby are
15 replicated along with the host genome. Moreover, certain vectors are capable of directing the expression of genes to which they are operatively linked. Such vectors are referred to herein as "expression vectors". In general, expression vectors of utility in recombinant DNA techniques are often in the form of plasmids. In the present specification, "plasmid" and "vector" can be used interchangeably as the plasmid is the most commonly used form of vector. However, the
20 invention is intended to include such other forms of expression vectors, such as viral vectors (*e.g.*, replication defective retroviruses, adenoviruses and adeno-associated viruses), which serve equivalent functions.

The recombinant expression vectors of the invention comprise a nucleic acid of the invention in a form suitable for expression of the nucleic acid in a host cell, which means that the
25 recombinant expression vectors include one or more regulatory sequences, selected on the basis of the host cells to be used for expression, that is operatively linked to the nucleic acid sequence to be expressed. Within a recombinant expression vector, "operably linked" is intended to mean that the nucleotide sequence of interest is linked to the regulatory sequence(s) in a manner that allows for expression of the nucleotide sequence (*e.g.*, in an *in vitro* transcription/translation
30 system or in a host cell when the vector is introduced into the host cell). The term "regulatory sequence" is intended to include promoters, enhancers and other expression control elements

(e.g., polyadenylation signals). Such regulatory sequences are described, for example, in Goeddel; GENE EXPRESSION TECHNOLOGY: METHODS IN ENZYMOLOGY 185, Academic Press, San Diego, Calif. (1990). Regulatory sequences include those that direct constitutive expression of a nucleotide sequence in many types of host cell and those that direct expression of the
5 nucleotide sequence only in certain host cells (e.g., tissue-specific regulatory sequences). It will be appreciated by those skilled in the art that the design of the expression vector can depend on such factors as the choice of the host cell to be transformed, the level of expression of protein desired, etc. The expression vectors of the invention can be introduced into host cells to thereby produce proteins or peptides, including fusion proteins or peptides, encoded by nucleic acids as
10 described herein (e.g., ORFX proteins, mutant forms of ORFX, fusion proteins, etc.).

The recombinant expression vectors of the invention can be designed for expression of ORFX in prokaryotic or eukaryotic cells. For example, ORFX can be expressed in bacterial cells such as *E. coli*, insect cells (using baculovirus expression vectors) yeast cells or mammalian cells. Suitable host cells are discussed further in Goeddel, GENE EXPRESSION TECHNOLOGY:
15 METHODS IN ENZYMOLOGY 185, Academic Press, San Diego, Calif. (1990). Alternatively, the recombinant expression vector can be transcribed and translated *in vitro*, for example using T7 promoter regulatory sequences and T7 polymerase.

Expression of proteins in prokaryotes is most often carried out in *E. coli* with vectors containing constitutive or inducible promoters directing the expression of either fusion or
20 non-fusion proteins. Fusion vectors add a number of amino acids to a protein encoded therein, usually to the amino terminus of the recombinant protein. Such fusion vectors typically serve three purposes: (1) to increase expression of recombinant protein; (2) to increase the solubility of the recombinant protein; and (3) to aid in the purification of the recombinant protein by acting as a ligand in affinity purification. Often, in fusion expression vectors, a proteolytic cleavage site is
25 introduced at the junction of the fusion moiety and the recombinant protein to enable separation of the recombinant protein from the fusion moiety subsequent to purification of the fusion protein. Such enzymes, and their cognate recognition sequences, include Factor Xa, thrombin and enterokinase. Typical fusion expression vectors include pGEX (Pharmacia Biotech Inc; Smith and Johnson (1988) *Gene* 67:31-40), pMAL (New England Biolabs, Beverly, Mass.) and
30 pRIT5 (Pharmacia, Piscataway, N.J.) that fuse glutathione S-transferase (GST), maltose E binding protein, or protein A, respectively, to the target recombinant protein.

Examples of suitable inducible non-fusion *E. coli* expression vectors include pTrc (Amrann *et al.*, (1988) *Gene* 69:301-315) and pET 11d (Studier *et al.*, GENE EXPRESSION TECHNOLOGY: METHODS IN ENZYMOLOGY 185, Academic Press, San Diego, Calif. (1990) 60-89).

5 One strategy to maximize recombinant protein expression in *E. coli* is to express the protein in a host bacteria with an impaired capacity to proteolytically cleave the recombinant protein. See, Gottesman, GENE EXPRESSION TECHNOLOGY: METHODS IN ENZYMOLOGY 185, Academic Press, San Diego, Calif. (1990) 119-128. Another strategy is to alter the nucleic acid sequence of the nucleic acid to be inserted into an expression vector so that the individual codons
10 for each amino acid are those preferentially utilized in *E. coli* (Wada *et al.*, (1992) *Nucleic Acids Res.* 20:2111-2118). Such alteration of nucleic acid sequences of the invention can be carried out by standard DNA synthesis techniques.

In another embodiment, the ORFX expression vector is a yeast expression vector. Examples of vectors for expression in yeast *S. cerevisiae* include pYepSec1 (Baldari, *et al.*,
15 (1987) *EMBO J* 6:229-234), pMFa (Kurjan and Herskowitz, (1982) *Cell* 30:933-943), pJRY88 (Schultz *et al.*, (1987) *Gene* 54:113-123), pYES2 (Invitrogen Corporation, San Diego, Calif.), and picZ (InVitrogen Corp, San Diego, Calif.).

Alternatively, ORFX can be expressed in insect cells using baculovirus expression vectors. Baculovirus vectors available for expression of proteins in cultured insect cells (*e.g.*,
20 SF9 cells) include the pAc series (Smith *et al.* (1983) *Mol Cell Biol* 3:2156-2165) and the pVL series (Lucklow and Summers (1989) *Virology* 170:31-39).

In yet another embodiment, a nucleic acid of the invention is expressed in mammalian cells using a mammalian expression vector. Examples of mammalian expression vectors include pCDM8 (Seed (1987) *Nature* 329:840) and pMT2PC (Kaufman *et al.* (1987) *EMBO J*
25 6: 187-195). When used in mammalian cells, the expression vector's control functions are often provided by viral regulatory elements. For example, commonly used promoters are derived from polyoma, Adenovirus 2, cytomegalovirus and Simian Virus 40. For other suitable expression systems for both prokaryotic and eukaryotic cells. See, *e.g.*, Chapters 16 and 17 of Sambrook *et al.*, MOLECULAR CLONING: A LABORATORY MANUAL. 2nd ed., Cold Spring Harbor Laboratory,
30 Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y., 1989.

In another embodiment, the recombinant mammalian expression vector is capable of directing expression of the nucleic acid preferentially in a particular cell type (e.g., tissue-specific regulatory elements are used to express the nucleic acid). Tissue-specific regulatory elements are known in the art. Non-limiting examples of suitable tissue-specific promoters include the albumin promoter (liver-specific; Pinkert *et al.* (1987) *Genes Dev* 1:268-277), lymphoid-specific promoters (Calame and Eaton (1988) *Adv Immunol* 43:235-275), in particular promoters of T cell receptors (Winoto and Baltimore (1989) *EMBO J* 8:729-733) and immunoglobulins (Banerji *et al.* (1983) *Cell* 33:729-740; Queen and Baltimore (1983) *Cell* 33:741-748), neuron-specific promoters (e.g., the neurofilament promoter; Byrne and Ruddle (1989) *PNAS* 86:5473-5477), pancreas-specific promoters (Edlund *et al.* (1985) *Science* 230:912-916), and mammary gland-specific promoters (e.g., milk whey promoter; U.S. Pat. No. 4,873,316 and European Application Publication No. 264,166). Developmentally-regulated promoters are also encompassed, e.g., the murine hox promoters (Kessel and Gruss (1990) *Science* 249:374-379) and the α -fetoprotein promoter (Campes and Tilghman (1989) *Genes Dev* 3:537-546).

The invention further provides a recombinant expression vector comprising a DNA molecule of the invention cloned into the expression vector in an antisense orientation. That is, the DNA molecule is operatively linked to a regulatory sequence in a manner that allows for expression (by transcription of the DNA molecule) of an RNA molecule that is antisense to ORFX mRNA. Regulatory sequences operatively linked to a nucleic acid cloned in the antisense orientation can be chosen that direct the continuous expression of the antisense RNA molecule in a variety of cell types, for instance viral promoters and/or enhancers, or regulatory sequences can be chosen that direct constitutive, tissue specific or cell type specific expression of antisense RNA. The antisense expression vector can be in the form of a recombinant plasmid, phagemid or attenuated virus in which antisense nucleic acids are produced under the control of a high efficiency regulatory region, the activity of which can be determined by the cell type into which the vector is introduced. For a discussion of the regulation of gene expression using antisense genes see Weintraub *et al.*, "Antisense RNA as a molecular tool for genetic analysis," Reviews--Trends in Genetics, Vol. 1(1) 1986.

Another aspect of the invention pertains to host cells into which a recombinant expression vector of the invention has been introduced. The terms "host cell" and "recombinant

host cell" are used interchangeably herein. It is understood that such terms refer not only to the particular subject cell but to the progeny or potential progeny of such a cell. Because certain modifications may occur in succeeding generations due to either mutation or environmental influences, such progeny may not, in fact, be identical to the parent cell, but are still included within the scope of the term as used herein.

A host cell can be any prokaryotic or eukaryotic cell. For example, ORFX protein can be expressed in bacterial cells such as *E. coli*, insect cells, yeast or mammalian cells (such as Chinese hamster ovary cells (CHO) or COS cells). Other suitable host cells are known to those skilled in the art.

Vector DNA can be introduced into prokaryotic or eukaryotic cells via conventional transformation or transfection techniques. As used herein, the terms "transformation" and "transfection" are intended to refer to a variety of art-recognized techniques for introducing foreign nucleic acid (*e.g.*, DNA) into a host cell, including calcium phosphate or calcium chloride co-precipitation, DEAE-dextran-mediated transfection, lipofection, or electroporation. Suitable methods for transforming or transfecting host cells can be found in Sambrook, *et al.* (MOLECULAR CLONING: A LABORATORY MANUAL, 2nd ed., Cold Spring Harbor Laboratory, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y., 1989), and other laboratory manuals.

For stable transfection of mammalian cells, it is known that, depending upon the expression vector and transfection technique used, only a small fraction of cells may integrate the foreign DNA into their genome. In order to identify and select these integrants, a gene that encodes a selectable marker (*e.g.*, resistance to antibiotics) is generally introduced into the host cells along with the gene of interest. Various selectable markers include those that confer resistance to drugs, such as G418, hygromycin and methotrexate. Nucleic acid encoding a selectable marker can be introduced into a host cell on the same vector as that encoding ORFX or can be introduced on a separate vector. Cells stably transfected with the introduced nucleic acid can be identified by drug selection (*e.g.*, cells that have incorporated the selectable marker gene will survive, while the other cells die).

A host cell of the invention, such as a prokaryotic or eukaryotic host cell in culture, can be used to produce (*i.e.*, express) ORFX protein. Accordingly, the invention further provides methods for producing ORFX protein using the host cells of the invention. In one embodiment,

the method comprises culturing the host cell of invention (into which a recombinant expression vector encoding ORFX has been introduced) in a suitable medium such that ORFX protein is produced. In another embodiment, the method further comprises isolating ORFX from the medium or the host cell.

5 **Transgenic animals**

The host cells of the invention can also be used to produce nonhuman transgenic animals. For example, in one embodiment, a host cell of the invention is a fertilized oocyte or an embryonic stem cell into which ORFX-coding sequences have been introduced. Such host cells can then be used to create non-human transgenic animals in which exogenous ORFX sequences
10 have been introduced into their genome or homologous recombinant animals in which endogenous ORFX sequences have been altered. Such animals are useful for studying the function and/or activity of ORFX and for identifying and/or evaluating modulators of ORFX activity. As used herein, a "transgenic animal" is a non-human animal, preferably a mammal, more preferably a rodent such as a rat or mouse, in which one or more of the cells of the animal
15 includes a transgene. Other examples of transgenic animals include non-human primates, sheep, dogs, cows, goats, chickens, amphibians, etc. A transgene is exogenous DNA that is integrated into the genome of a cell from which a transgenic animal develops and that remains in the genome of the mature animal, thereby directing the expression of an encoded gene product in one or more cell types or tissues of the transgenic animal. As used herein, a "homologous
20 recombinant animal" is a non-human animal, preferably a mammal, more preferably a mouse, in which an endogenous ORFX gene has been altered by homologous recombination between the endogenous gene and an exogenous DNA molecule introduced into a cell of the animal, *e.g.*, an embryonic cell of the animal, prior to development of the animal.

A transgenic animal of the invention can be created by introducing ORFX-encoding
25 nucleic acid into the male pronuclei of a fertilized oocyte, *e.g.*, by microinjection, retroviral infection, and allowing the oocyte to develop in a pseudopregnant female foster animal. The human ORFX DNA sequence of SEQ ID NO:2*n*-1 (wherein *n* = 1 to 3161) can be introduced as a transgene into the genome of a non-human animal. Alternatively, a nonhuman homologue of the human ORFX gene, such as a mouse ORFX gene, can be isolated based on hybridization to
30 the human ORFX cDNA (described further above) and used as a transgene. Intronic sequences and polyadenylation signals can also be included in the transgene to increase the efficiency of

expression of the transgene. A tissue-specific regulatory sequence(s) can be operably linked to the ORFX transgene to direct expression of ORFX protein to particular cells. Methods for generating transgenic animals via embryo manipulation and microinjection, particularly animals such as mice, have become conventional in the art and are described, for example, in U.S. Pat. Nos. 4,736,866; 4,870,009; and 4,873,191; and Hogan 1986, In: MANIPULATING THE MOUSE EMBRYO, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y. Similar methods are used for production of other transgenic animals. A transgenic founder animal can be identified based upon the presence of the ORFX transgene in its genome and/or expression of ORFX mRNA in tissues or cells of the animals. A transgenic founder animal can then be used to breed additional animals carrying the transgene. Moreover, transgenic animals carrying a transgene encoding ORFX can further be bred to other transgenic animals carrying other transgenes.

To create a homologous recombinant animal, a vector is prepared which contains at least a portion of a ORFX gene into which a deletion, addition or substitution has been introduced to thereby alter, *e.g.*, functionally disrupt, the ORFX gene. The ORFX gene can be a human gene (*e.g.*, SEQ ID NO:2n-1 (wherein $n = 1$ to 3161)), but more preferably, is a non-human homologue of a human ORFX gene. For example, a mouse homologue of human ORFX gene of SEQ ID NO:2n-1 (wherein $n = 1$ to 3161) can be used to construct a homologous recombination vector suitable for altering an endogenous ORFX gene in the mouse genome. In one embodiment, the vector is designed such that, upon homologous recombination, the endogenous ORFX gene is functionally disrupted (*i.e.*, no longer encodes a functional protein; also referred to as a "knock out" vector).

Alternatively, the vector can be designed such that, upon homologous recombination, the endogenous ORFX gene is mutated or otherwise altered but still encodes functional protein (*e.g.*, the upstream regulatory region can be altered to thereby alter the expression of the endogenous ORFX protein). In the homologous recombination vector, the altered portion of the ORFX gene is flanked at its 5' and 3' ends by additional nucleic acid of the ORFX gene to allow for homologous recombination to occur between the exogenous ORFX gene carried by the vector and an endogenous ORFX gene in an embryonic stem cell. The additional flanking ORFX nucleic acid is of sufficient length for successful homologous recombination with the endogenous gene. Typically, several kilobases of flanking DNA (both at the 5' and 3' ends) are included in the vector. See *e.g.*, Thomas *et al.* (1987) *Cell* 51:503 for a description of

homologous recombination vectors. The vector is introduced into an embryonic stem cell line (e.g., by electroporation) and cells in which the introduced ORFX gene has homologously recombined with the endogenous ORFX gene are selected (see e.g., Li *et al.* (1992) *Cell* 69:915).

The selected cells are then injected into a blastocyst of an animal (e.g., a mouse) to form aggregation chimeras. See e.g., Bradley 1987, In: TERATOCARCINOMAS AND EMBRYONIC STEM CELLS: A PRACTICAL APPROACH, Robertson, ed. IRL, Oxford, pp. 113-152. A chimeric embryo can then be implanted into a suitable pseudopregnant female foster animal and the embryo brought to term. Progeny harboring the homologously recombined DNA in their germ cells can be used to breed animals in which all cells of the animal contain the homologously recombined DNA by germline transmission of the transgene. Methods for constructing homologous recombination vectors and homologous recombinant animals are described further in Bradley (1991) *Curr Opin Biotechnol* 2:823-829; PCT International Publication Nos.: WO 90/11354; WO 91/01140; WO 92/0968; and WO 93/04169.

In another embodiment, transgenic non-humans animals can be produced that contain selected systems that allow for regulated expression of the transgene. One example of such a system is the cre/loxP recombinase system of bacteriophage P1. For a description of the cre/loxP recombinase system, see, e.g., Lakso *et al.* (1992) *PNAS* 89:6232-6236. Another example of a recombinase system is the FLP recombinase system of *Saccharomyces cerevisiae* (O'Gorman *et al.* (1991) *Science* 251:1351-1355. If a cre/loxP recombinase system is used to regulate expression of the transgene, animals containing transgenes encoding both the Cre recombinase and a selected protein are required. Such animals can be provided through the construction of "double" transgenic animals, e.g., by mating two transgenic animals, one containing a transgene encoding a selected protein and the other containing a transgene encoding a recombinase.

Clones of the non-human transgenic animals described herein can also be produced according to the methods described in Wilmut *et al.* (1997) *Nature* 385:810-813. In brief, a cell, e.g., a somatic cell, from the transgenic animal can be isolated and induced to exit the growth cycle and enter G₀ phase. The quiescent cell can then be fused, e.g., through the use of electrical pulses, to an enucleated oocyte from an animal of the same species from which the quiescent cell is isolated. The reconstructed oocyte is then cultured such that it develops to morula or blastocyte and then transferred to pseudopregnant female foster animal. The offspring borne of

this female foster animal will be a clone of the animal from which the cell, *e.g.*, the somatic cell, is isolated.

Pharmaceutical Compositions

The ORFX nucleic acid molecules, ORFX proteins, and anti-ORFX antibodies (also referred to herein as "active compounds") of the invention, and derivatives, fragments, analogs and homologs thereof, can be incorporated into pharmaceutical compositions suitable for administration. Such compositions typically comprise the nucleic acid molecule, protein, or antibody and a pharmaceutically acceptable carrier. As used herein, "pharmaceutically acceptable carrier" is intended to include any and all solvents, dispersion media, coatings, antibacterial and antifungal agents, isotonic and absorption delaying agents, and the like, compatible with pharmaceutical administration. Suitable carriers are described in the most recent edition of Remington's Pharmaceutical Sciences, a standard reference text in the field, which is incorporated herein by reference. Preferred examples of such carriers or diluents include, but are not limited to, water, saline, finger's solutions, dextrose solution, and 5% human serum albumin. Liposomes and non-aqueous vehicles such as fixed oils may also be used. The use of such media and agents for pharmaceutically active substances is well known in the art. Except insofar as any conventional media or agent is incompatible with the active compound, use thereof in the compositions is contemplated. Supplementary active compounds can also be incorporated into the compositions.

A pharmaceutical composition of the invention is formulated to be compatible with its intended route of administration. Examples of routes of administration include parenteral, *e.g.*, intravenous, intradermal, subcutaneous, oral (*e.g.*, inhalation), transdermal (topical), transmucosal, and rectal administration. Solutions or suspensions used for parenteral, intradermal, or subcutaneous application can include the following components: a sterile diluent such as water for injection, saline solution, fixed oils, polyethylene glycols, glycerine, propylene glycol or other synthetic solvents; antibacterial agents such as benzyl alcohol or methyl parabens; antioxidants such as ascorbic acid or sodium bisulfite; chelating agents such as ethylenediaminetetraacetic acid; buffers such as acetates, citrates or phosphates, and agents for the adjustment of tonicity such as sodium chloride or dextrose. The pH can be adjusted with acids or bases, such as hydrochloric acid or sodium hydroxide. The parenteral preparation can be enclosed in ampoules, disposable syringes or multiple dose vials made of glass or plastic.

Pharmaceutical compositions suitable for injectable use include sterile aqueous solutions (where water soluble) or dispersions and sterile powders for the extemporaneous preparation of sterile injectable solutions or dispersion. For intravenous administration, suitable carriers include physiological saline, bacteriostatic water, Cremophor EL™ (BASF, Parsippany, N.J.) or phosphate buffered saline (PBS). In all cases, the composition must be sterile and should be fluid to the extent that easy syringeability exists. It must be stable under the conditions of manufacture and storage and must be preserved against the contaminating action of microorganisms such as bacteria and fungi. The carrier can be a solvent or dispersion medium containing, for example, water, ethanol, polyol (for example, glycerol, propylene glycol, and liquid polyethylene glycol, and the like), and suitable mixtures thereof. The proper fluidity can be maintained, for example, by the use of a coating such as lecithin, by the maintenance of the required particle size in the case of dispersion and by the use of surfactants. Prevention of the action of microorganisms can be achieved by various antibacterial and antifungal agents, for example, parabens, chlorobutanol, phenol, ascorbic acid, thimerosal, and the like. In many cases, it will be preferable to include isotonic agents, for example, sugars, polyalcohols such as manitol, sorbitol, sodium chloride in the composition. Prolonged absorption of the injectable compositions can be brought about by including in the composition an agent which delays absorption, for example, aluminum monostearate and gelatin.

Sterile injectable solutions can be prepared by incorporating the active compound (*e.g.*, a ORFX protein or anti-ORFX antibody) in the required amount in an appropriate solvent with one or a combination of ingredients enumerated above, as required, followed by filtered sterilization. Generally, dispersions are prepared by incorporating the active compound into a sterile vehicle that contains a basic dispersion medium and the required other ingredients from those enumerated above. In the case of sterile powders for the preparation of sterile injectable solutions, methods of preparation are vacuum drying and freeze-drying that yields a powder of the active ingredient plus any additional desired ingredient from a previously sterile-filtered solution thereof.

Oral compositions generally include an inert diluent or an edible carrier. They can be enclosed in gelatin capsules or compressed into tablets. For the purpose of oral therapeutic administration, the active compound can be incorporated with excipients and used in the form of tablets, troches, or capsules. Oral compositions can also be prepared using a fluid carrier for use

as a mouthwash, wherein the compound in the fluid carrier is applied orally and swished and expectorated or swallowed. Pharmaceutically compatible binding agents, and/or adjuvant materials can be included as part of the composition. The tablets, pills, capsules, troches and the like can contain any of the following ingredients, or compounds of a similar nature: a binder
5 such as microcrystalline cellulose, gum tragacanth or gelatin; an excipient such as starch or lactose, a disintegrating agent such as alginic acid, Primogel, or corn starch; a lubricant such as magnesium stearate or Sterotes; a glidant such as colloidal silicon dioxide; a sweetening agent such as sucrose or saccharin; or a flavoring agent such as peppermint, methyl salicylate, or orange flavoring.

10 For administration by inhalation, the compounds are delivered in the form of an aerosol spray from pressured container or dispenser which contains a suitable propellant, *e.g.*, a gas such as carbon dioxide, or a nebulizer.

Systemic administration can also be by transmucosal or transdermal means. For transmucosal or transdermal administration, penetrants appropriate to the barrier to be permeated
15 are used in the formulation. Such penetrants are generally known in the art, and include, for example, for transmucosal administration, detergents, bile salts, and fusidic acid derivatives. Transmucosal administration can be accomplished through the use of nasal sprays or suppositories. For transdermal administration, the active compounds are formulated into ointments, salves, gels, or creams as generally known in the art.

20 The compounds can also be prepared in the form of suppositories (*e.g.*, with conventional suppository bases such as cocoa butter and other glycerides) or retention enemas for rectal delivery.

In one embodiment, the active compounds are prepared with carriers that will protect the compound against rapid elimination from the body, such as a controlled release formulation, including implants and microencapsulated delivery systems. Biodegradable, biocompatible
25 polymers can be used, such as ethylene vinyl acetate, polyanhydrides, polyglycolic acid, collagen, polyorthoesters, and polylactic acid. Methods for preparation of such formulations will be apparent to those skilled in the art. The materials can also be obtained commercially from Alza Corporation and Nova Pharmaceuticals, Inc. Liposomal suspensions (including liposomes targeted to infected cells with monoclonal antibodies to viral antigens) can also be used as
30 pharmaceutically acceptable carriers. These can be prepared according to methods known to those skilled in the art, for example, as described in U.S. Pat. No. 4,522,811.

It is especially advantageous to formulate oral or parenteral compositions in dosage unit form for ease of administration and uniformity of dosage. Dosage unit form as used herein refers to physically discrete units suited as unitary dosages for the subject to be treated; each unit containing a predetermined quantity of active compound calculated to produce the desired therapeutic effect in association with the required pharmaceutical carrier. The specification for the dosage unit forms of the invention are dictated by and directly dependent on the unique characteristics of the active compound and the particular therapeutic effect to be achieved.

The nucleic acid molecules of the invention can be inserted into vectors and used as gene therapy vectors. Gene therapy vectors can be delivered to a subject by any of a number of routes, *e.g.*, as described in U.S. Patent Nos. 5,703,055. Delivery can thus also include, *e.g.*, intravenous injection, local administration (see U.S. Pat. No. 5,328,470) or stereotactic injection (see *e.g.*, Chen *et al.* (1994) *PNAS* 91:3054-3057). The pharmaceutical preparation of the gene therapy vector can include the gene therapy vector in an acceptable diluent, or can comprise a slow release matrix in which the gene delivery vehicle is imbedded. Alternatively, where the complete gene delivery vector can be produced intact from recombinant cells, *e.g.*, retroviral vectors, the pharmaceutical preparation can include one or more cells that produce the gene delivery system.

The pharmaceutical compositions can be included in a container, pack, or dispenser together with instructions for administration.

Additional Uses and Methods of the Invention

The nucleic acid molecules, proteins, protein homologues, and antibodies described herein can be used in one or more of the following methods: (a) screening assays; (b) detection assays (*e.g.*, chromosomal mapping, cell and tissue typing, forensic biology), (c) predictive medicine (*e.g.*, diagnostic assays, prognostic assays, monitoring clinical trials, and pharmacogenomics); and (d) methods of treatment (*e.g.*, therapeutic and prophylactic).

The isolated nucleic acid molecules of the invention can be used to express ORFX protein (*e.g.*, via a recombinant expression vector in a host cell in gene therapy applications), to detect ORFX mRNA (*e.g.*, in a biological sample) or a genetic lesion in a ORFX gene, and to modulate ORFX activity, as described further below. In addition, the ORFX proteins can be used to screen drugs or compounds that modulate the ORFX activity or expression as well as to treat disorders characterized by insufficient or excessive production of ORFX protein, for

example proliferative or differentiative disorders, or production of ORFX protein forms that have decreased or aberrant activity compared to ORFX wild type protein. In addition, the anti-ORFX antibodies of the invention can be used to detect and isolate ORFX proteins and modulate ORFX activity.

5 This invention further pertains to novel agents identified by the above described screening assays and uses thereof for treatments as described herein.

Screening Assays

 The invention provides a method (also referred to herein as a "screening assay") for identifying modulators, *i.e.*, candidate or test compounds or agents (*e.g.*, peptides, 10 peptidomimetics, small molecules or other drugs) that bind to ORFX proteins or have a stimulatory or inhibitory effect on, for example, ORFX expression or ORFX activity.

 In one embodiment, the invention provides assays for screening candidate or test compounds which bind to or modulate the activity of a ORFX protein or polypeptide or biologically active portion thereof. The test compounds of the present invention can be obtained 15 using any of the numerous approaches in combinatorial library methods known in the art, including: biological libraries; spatially addressable parallel solid phase or solution phase libraries; synthetic library methods requiring deconvolution; the "one-bead one-compound" library method; and synthetic library methods using affinity chromatography selection. The biological library approach is limited to peptide libraries, while the other four approaches are 20 applicable to peptide, non-peptide oligomer or small molecule libraries of compounds (Lam (1997) *Anticancer Drug Des* 12:145).

 Examples of methods for the synthesis of molecular libraries can be found in the art, for example in: DeWitt *et al.* (1993) *Proc Natl Acad Sci U.S.A.* 90:6909; Erb *et al.* (1994) *Proc Natl Acad Sci U.S.A.* 91:11422; Zuckermann *et al.* (1994) *J Med Chem* 37:2678; Cho *et al.* (1993) 25 *Science* 261:1303; Carrell *et al.* (1994) *Angew Chem Int Ed Engl* 33:2059; Carell *et al.* (1994) *Angew Chem Int Ed Engl* 33:2061; and Gallop *et al.* (1994) *J Med Chem* 37:1233.

 Libraries of compounds may be presented in solution (*e.g.*, Houghten (1992) *Biotechniques* 13:412-421), or on beads (Lam (1991) *Nature* 354:82-84), on chips (Fodor (1993) *Nature* 364:555-556), bacteria (Ladner U.S. Pat. No. 5,223,409), spores (Ladner USP '409), 30 plasmids (Cull *et al.* (1992) *Proc Natl Acad Sci USA* 89:1865-1869) or on phage (Scott and

Smith (1990) *Science* 249:386-390; Devlin (1990) *Science* 249:404-406; Cwirla *et al.* (1990) *Proc Natl Acad Sci U.S.A.* 87:6378-6382; Felici (1991) *J Mol Biol* 222:301-310; Ladner above.).

In one embodiment, an assay is a cell-based assay in which a cell which expresses a membrane-bound form of ORFX protein, or a biologically active portion thereof, on the cell surface is contacted with a test compound and the ability of the test compound to bind to a ORFX protein determined. The cell, for example, can be of mammalian origin or a yeast cell. Determining the ability of the test compound to bind to the ORFX protein can be accomplished, for example, by coupling the test compound with a radioisotope or enzymatic label such that binding of the test compound to the ORFX protein or biologically active portion thereof can be determined by detecting the labeled compound in a complex. For example, test compounds can be labeled with ^{125}I , ^{35}S , ^{14}C , or ^3H , either directly or indirectly, and the radioisotope detected by direct counting of radioemission or by scintillation counting. Alternatively, test compounds can be enzymatically labeled with, for example, horseradish peroxidase, alkaline phosphatase, or luciferase, and the enzymatic label detected by determination of conversion of an appropriate substrate to product. In one embodiment, the assay comprises contacting a cell which expresses a membrane-bound form of ORFX protein, or a biologically active portion thereof, on the cell surface with a known compound which binds ORFX to form an assay mixture, contacting the assay mixture with a test compound, and determining the ability of the test compound to interact with a ORFX protein, wherein determining the ability of the test compound to interact with a ORFX protein comprises determining the ability of the test compound to preferentially bind to ORFX or a biologically active portion thereof as compared to the known compound.

In another embodiment, an assay is a cell-based assay comprising contacting a cell expressing a membrane-bound form of ORFX protein, or a biologically active portion thereof, on the cell surface with a test compound and determining the ability of the test compound to modulate (*e.g.*, stimulate or inhibit) the activity of the ORFX protein or biologically active portion thereof. Determining the ability of the test compound to modulate the activity of ORFX or a biologically active portion thereof can be accomplished, for example, by determining the ability of the ORFX protein to bind to or interact with a ORFX target molecule. As used herein, a "target molecule" is a molecule with which a ORFX protein binds or interacts in nature, for example, a molecule on the surface of a cell which expresses a ORFX interacting protein, a molecule on the surface of a second cell, a molecule in the extracellular milieu, a molecule

associated with the internal surface of a cell membrane or a cytoplasmic molecule. A ORFX target molecule can be a non-ORFX molecule or a ORFX protein or polypeptide of the present invention. In one embodiment, a ORFX target molecule is a component of a signal transduction pathway that facilitates transduction of an extracellular signal (*e.g.*, a signal generated by binding of a compound to a membrane-bound ORFX molecule) through the cell membrane and into the cell. The target, for example, can be a second intercellular protein that has catalytic activity or a protein that facilitates the association of downstream signaling molecules with ORFX.

Determining the ability of the ORFX protein to bind to or interact with a ORFX target molecule can be accomplished by one of the methods described above for determining direct binding. In one embodiment, determining the ability of the ORFX protein to bind to or interact with a ORFX target molecule can be accomplished by determining the activity of the target molecule. For example, the activity of the target molecule can be determined by detecting induction of a cellular second messenger of the target (*i.e.* intracellular Ca^{2+} , diacylglycerol, IP_3 , etc.), detecting catalytic/enzymatic activity of the target an appropriate substrate, detecting the induction of a reporter gene (comprising a ORFX-responsive regulatory element operatively linked to a nucleic acid encoding a detectable marker, *e.g.*, luciferase), or detecting a cellular response, for example, cell survival, cellular differentiation, or cell proliferation.

In yet another embodiment, an assay of the present invention is a cell-free assay comprising contacting a ORFX protein or biologically active portion thereof with a test compound and determining the ability of the test compound to bind to the ORFX protein or biologically active portion thereof. Binding of the test compound to the ORFX protein can be determined either directly or indirectly as described above. In one embodiment, the assay comprises contacting the ORFX protein or biologically active portion thereof with a known compound which binds ORFX to form an assay mixture, contacting the assay mixture with a test compound, and determining the ability of the test compound to interact with a ORFX protein, wherein determining the ability of the test compound to interact with a ORFX protein comprises determining the ability of the test compound to preferentially bind to ORFX or biologically active portion thereof as compared to the known compound.

In another embodiment, an assay is a cell-free assay comprising contacting ORFX protein or biologically active portion thereof with a test compound and determining the ability of the test compound to modulate (*e.g.*, stimulate or inhibit) the activity of the ORFX protein or

biologically active portion thereof. Determining the ability of the test compound to modulate the activity of ORFX can be accomplished, for example, by determining the ability of the ORFX protein to bind to a ORFX target molecule by one of the methods described above for determining direct binding. In an alternative embodiment, determining the ability of the test compound to modulate the activity of ORFX can be accomplished by determining the ability of the ORFX protein further modulate a ORFX target molecule. For example, the catalytic/enzymatic activity of the target molecule on an appropriate substrate can be determined as previously described.

In yet another embodiment, the cell-free assay comprises contacting the ORFX protein or biologically active portion thereof with a known compound which binds ORFX to form an assay mixture, contacting the assay mixture with a test compound, and determining the ability of the test compound to interact with a ORFX protein, wherein determining the ability of the test compound to interact with a ORFX protein comprises determining the ability of the ORFX protein to preferentially bind to or modulate the activity of a ORFX target molecule.

The cell-free assays of the present invention are amenable to use of both the soluble form or the membrane-bound form of ORFX. In the case of cell-free assays comprising the membrane-bound form of ORFX, it may be desirable to utilize a solubilizing agent such that the membrane-bound form of ORFX is maintained in solution. Examples of such solubilizing agents include non-ionic detergents such as n-octylglucoside, n-dodecylglucoside, n-dodecylmaltoside, octanoyl-N-methylglucamide, decanoyl-N-methylglucamide, Triton® X-100, Triton® X-114, Thesit®, Isotridecypoly(ethylene glycol ether)_n, N-dodecyl--N,N-dimethyl-3-ammonio-1-propane sulfonate, 3-(3-cholamidopropyl)dimethylamminiol-1-propane sulfonate (CHAPS), or 3-(3-cholamidopropyl)dimethylamminiol-2-hydroxy-1-propane sulfonate (CHAPSO).

In more than one embodiment of the above assay methods of the present invention, it may be desirable to immobilize either ORFX or its target molecule to facilitate separation of complexed from uncomplexed forms of one or both of the proteins, as well as to accommodate automation of the assay. Binding of a test compound to ORFX, or interaction of ORFX with a target molecule in the presence and absence of a candidate compound, can be accomplished in any vessel suitable for containing the reactants. Examples of such vessels include microtiter plates, test tubes, and micro-centrifuge tubes. In one embodiment, a fusion protein can be provided that adds a domain that allows one or both of the proteins to be bound to a matrix. For

example, GST-ORFX fusion proteins or GST-target fusion proteins can be adsorbed onto glutathione sepharose beads (Sigma Chemical, St. Louis, MO) or glutathione derivatized microtiter plates, that are then combined with the test compound or the test compound and either the non-adsorbed target protein or ORFX protein, and the mixture is incubated under conditions conducive to complex formation (*e.g.*, at physiological conditions for salt and pH). Following incubation, the beads or microtiter plate wells are washed to remove any unbound components, the matrix immobilized in the case of beads, complex determined either directly or indirectly, for example, as described above. Alternatively, the complexes can be dissociated from the matrix, and the level of ORFX binding or activity determined using standard techniques.

Other techniques for immobilizing proteins on matrices can also be used in the screening assays of the invention. For example, either ORFX or its target molecule can be immobilized utilizing conjugation of biotin and streptavidin. Biotinylated ORFX or target molecules can be prepared from biotin-NHS (N-hydroxy-succinimide) using techniques well known in the art (*e.g.*, biotinylation kit, Pierce Chemicals, Rockford, Ill.), and immobilized in the wells of streptavidin-coated 96 well plates (Pierce Chemical). Alternatively, antibodies reactive with ORFX or target molecules, but which do not interfere with binding of the ORFX protein to its target molecule, can be derivatized to the wells of the plate, and unbound target or ORFX trapped in the wells by antibody conjugation. Methods for detecting such complexes, in addition to those described above for the GST-immobilized complexes, include immunodetection of complexes using antibodies reactive with the ORFX or target molecule, as well as enzyme-linked assays that rely on detecting an enzymatic activity associated with the ORFX or target molecule.

In another embodiment, modulators of ORFX expression are identified in a method wherein a cell is contacted with a candidate compound and the expression of ORFX mRNA or protein in the cell is determined. The level of expression of ORFX mRNA or protein in the presence of the candidate compound is compared to the level of expression of ORFX mRNA or protein in the absence of the candidate compound. The candidate compound can then be identified as a modulator of ORFX expression based on this comparison. For example, when expression of ORFX mRNA or protein is greater (statistically significantly greater) in the presence of the candidate compound than in its absence, the candidate compound is identified as a stimulator of ORFX mRNA or protein expression. Alternatively, when expression of ORFX mRNA or protein is less (statistically significantly less) in the presence of the candidate

compound than in its absence, the candidate compound is identified as an inhibitor of ORFX mRNA or protein expression. The level of ORFX mRNA or protein expression in the cells can be determined by methods described herein for detecting ORFX mRNA or protein.

5 In yet another aspect of the invention, the ORFX proteins can be used as "bait proteins" in a two-hybrid assay or three hybrid assay (see, *e.g.*, U.S. Pat. No. 5,283,317; Zervos *et al.* (1993) Cell 72:223-232; Madura *et al.* (1993) J Biol Chem 268:12046-12054; Bartel *et al.* (1993) Biotechniques 14:920-924; Iwabuchi *et al.* (1993) Oncogene 8:1693-1696; and Brent WO94/10300), to identify other proteins that bind to or interact with ORFX ("ORFX-binding proteins" or "ORFX-bp") and modulate ORFX activity. Such ORFX-binding proteins are also
10 likely to be involved in the propagation of signals by the ORFX proteins as, for example, upstream or downstream elements of the ORFX pathway.

The two-hybrid system is based on the modular nature of most transcription factors, which consist of separable DNA-binding and activation domains. Briefly, the assay utilizes two different DNA constructs. In one construct, the gene that codes for ORFX is fused to a gene
15 encoding the DNA binding domain of a known transcription factor (*e.g.*, GAL-4). In the other construct, a DNA sequence, from a library of DNA sequences, that encodes an unidentified protein ("prey" or "sample") is fused to a gene that codes for the activation domain of the known transcription factor. If the "bait" and the "prey" proteins are able to interact, *in vivo*, forming a ORFX-dependent complex, the DNA-binding and activation domains of the transcription factor
20 are brought into close proximity. This proximity allows transcription of a reporter gene (*e.g.*, LacZ) that is operably linked to a transcriptional regulatory site responsive to the transcription factor. Expression of the reporter gene can be detected and cell colonies containing the functional transcription factor can be isolated and used to obtain the cloned gene that encodes the protein which interacts with ORFX.

25 This invention further pertains to novel agents identified by the above-described screening assays and uses thereof for treatments as described herein.

Detection Assays

Portions or fragments of the cDNA sequences identified herein (and the corresponding complete gene sequences) can be used in numerous ways as polynucleotide reagents. For
30 example, these sequences can be used to: (i) map their respective genes on a chromosome; and, thus, locate gene regions associated with genetic disease; (ii) identify an individual from a

minute biological sample (tissue typing); and (iii) aid in forensic identification of a biological sample.

The ORFX sequences of the present invention can also be used to identify individuals from minute biological samples. In this technique, an individual's genomic DNA is digested with one or more restriction enzymes, and probed on a Southern blot to yield unique bands for identification. The sequences of the present invention are useful as additional DNA markers for RFLP ("restriction fragment length polymorphisms," described in U.S. Pat. No. 5,272,057).

Furthermore, the sequences of the present invention can be used to provide an alternative technique that determines the actual base-by-base DNA sequence of selected portions of an individual's genome. Thus, the ORFX sequences described herein can be used to prepare two PCR primers from the 5' and 3' ends of the sequences. These primers can then be used to amplify an individual's DNA and subsequently sequence it.

Panels of corresponding DNA sequences from individuals, prepared in this manner, can provide unique individual identifications, as each individual will have a unique set of such DNA sequences due to allelic differences. The sequences of the present invention can be used to obtain such identification sequences from individuals and from tissue. The ORFX sequences of the invention uniquely represent portions of the human genome. Allelic variation occurs to some degree in the coding regions of these sequences, and to a greater degree in the noncoding regions. It is estimated that allelic variation between individual humans occurs with a frequency of about once per each 500 bases. Much of the allelic variation is due to single nucleotide polymorphisms (SNPs), which include restriction fragment length polymorphisms (RFLPs).

Each of the sequences described herein can, to some degree, be used as a standard against which DNA from an individual can be compared for identification purposes. Because greater numbers of polymorphisms occur in the noncoding regions, fewer sequences are necessary to differentiate individuals. The noncoding sequences of SEQ ID NO:2*n*-1 (wherein *n* = 1 to 3161), as described above, can comfortably provide positive individual identification with a panel of perhaps 10 to 1,000 primers that each yield a noncoding amplified sequence of 100 bases. If predicted coding sequences are used, a more appropriate number of primers for positive individual identification would be 500-2,000.

Predictive Medicine

The present invention also pertains to the field of predictive medicine in which diagnostic assays, prognostic assays, pharmacogenomics, and monitoring clinical trials are used for prognostic (predictive) purposes to thereby treat an individual prophylactically. Accordingly, one aspect of the present invention relates to diagnostic assays for determining ORFX protein and/or nucleic acid expression as well as ORFX activity, in the context of a biological sample (*e.g.*, blood, serum, cells, tissue) to thereby determine whether an individual is afflicted with a disease or disorder, or is at risk of developing a disorder, associated with aberrant ORFX expression or activity. The invention also provides for prognostic (or predictive) assays for determining whether an individual is at risk of developing a disorder associated with ORFX protein, nucleic acid expression or activity. For example, mutations in a ORFX gene can be assayed in a biological sample. Such assays can be used for prognostic or predictive purpose to thereby prophylactically treat an individual prior to the onset of a disorder characterized by or associated with ORFX protein, nucleic acid expression or activity.

Another aspect of the invention provides methods for determining ORFX protein, nucleic acid expression or ORFX activity in an individual to thereby select appropriate therapeutic or prophylactic agents for that individual (referred to herein as "pharmacogenomics"). Pharmacogenomics allows for the selection of agents (*e.g.*, drugs) for therapeutic or prophylactic treatment of an individual based on the genotype of the individual (*e.g.*, the genotype of the individual examined to determine the ability of the individual to respond to a particular agent.)

Yet another aspect of the invention pertains to monitoring the influence of agents (*e.g.*, drugs, compounds) on the expression or activity of ORFX in clinical trials.

Use of Partial ORFX Sequences in Forensic Biology

DNA-based identification techniques can also be used in forensic biology. Forensic biology is a scientific field employing genetic typing of biological evidence found at a crime scene as a means for positively identifying, for example, a perpetrator of a crime. To make such an identification, PCR technology can be used to amplify DNA sequences taken from very small biological samples such as tissues, *e.g.*, hair or skin, or body fluids, *e.g.*, blood, saliva, or semen

found at a crime scene. The amplified sequence can then be compared to a standard, thereby allowing identification of the origin of the biological sample.

The sequences of the present invention can be used to provide polynucleotide reagents, *e.g.*, PCR primers, targeted to specific loci in the human genome, that can enhance the reliability of DNA-based forensic identifications by, for example, providing another "identification marker" (*i.e.* another DNA sequence that is unique to a particular individual). As mentioned above, actual base sequence information can be used for identification as an accurate alternative to patterns formed by restriction enzyme generated fragments. Sequences targeted to noncoding regions of SEQ ID NOs: __ are particularly appropriate for this use as greater numbers of polymorphisms occur in the noncoding regions, making it easier to differentiate individuals using this technique. Examples of polynucleotide reagents include the ORFX sequences or portions thereof, *e.g.*, fragments derived from the noncoding regions of one or more of SEQ ID NO:2*n*-1 (where *n* = 1 to 3161), having a length of at least 20 bases, preferably at least 30 bases.

The ORFX sequences described herein can further be used to provide polynucleotide reagents, *e.g.*, labeled or label-able probes that can be used, for example, in an *in situ* hybridization technique, to identify a specific tissue, *e.g.*, brain tissue, etc. This can be very useful in cases where a forensic pathologist is presented with a tissue of unknown origin. Panels of such ORFX probes can be used to identify tissue by species and/or by organ type.

In a similar fashion, these reagents, *e.g.*, ORFX primers or probes can be used to screen tissue culture for contamination (*i.e.* screen for the presence of a mixture of different types of cells in a culture).

Predictive Medicine

The present invention also pertains to the field of predictive medicine in which diagnostic assays, prognostic assays, pharmacogenomics, and monitoring clinical trials are used for prognostic (predictive) purposes to thereby treat an individual prophylactically. Accordingly, one aspect of the present invention relates to diagnostic assays for determining ORFX protein and/or nucleic acid expression as well as ORFX activity, in the context of a biological sample (*e.g.*, blood, serum, cells, tissue) to thereby determine whether an individual is afflicted with a disease or disorder, or is at risk of developing a disorder, associated with aberrant ORFX expression or activity. The invention also provides for prognostic (or predictive) assays for determining whether an individual is at risk of developing a disorder associated with ORFX protein, nucleic

acid expression or activity. For example, mutations in a ORFX gene can be assayed in a biological sample. Such assays can be used for prognostic or predictive purpose to thereby prophylactically treat an individual prior to the onset of a disorder characterized by or associated with ORFX protein, nucleic acid expression or activity.

5 Another aspect of the invention provides methods for determining ORFX protein, nucleic acid expression or ORFX activity in an individual to thereby select appropriate therapeutic or prophylactic agents for that individual (referred to herein as "pharmacogenomics").

Pharmacogenomics allows for the selection of agents (*e.g.*, drugs) for therapeutic or prophylactic treatment of an individual based on the genotype of the individual (*e.g.*, the genotype of the individual examined to determine the ability of the individual to respond to a particular agent.)

10 Yet another aspect of the invention pertains to monitoring the influence of agents (*e.g.*, drugs, compounds) on the expression or activity of ORFX in clinical trials.

These and other agents are described in further detail in the following sections.

Diagnostic Assays

15 Other conditions in which proliferation of cells plays a role include tumors, restenosis, psoriasis, Dupuytren's contracture, diabetic complications, Kaposi's sarcoma and rheumatoid arthritis.

An ORFX polypeptide may be used to identify an interacting polypeptide a sample or tissue. The method comprises contacting the sample or tissue with ORFX, allowing formation of a complex between the ORFX polypeptide and the interacting polypeptide, and detecting the complex, if present.

20 The proteins of the invention may be used to stimulate production of antibodies specifically binding the proteins. Such antibodies may be used in immunodiagnostic procedures to detect the occurrence of the protein in a sample. The proteins of the invention may be used to stimulate cell growth and cell proliferation in conditions in which such growth would be favorable. An example would be to counteract toxic side effects of chemotherapeutic agents on, for example, hematopoiesis and platelet formation, linings of the gastrointestinal tract, and hair follicles. They may also be used to stimulate new cell growth in neurological disorders including, for example, Alzheimer's disease. Alternatively, antagonistic treatments may be administered in which an antibody specifically binding the ORFX-like proteins of the invention

would abrogate the specific growth-inducing effects of the proteins. Such antibodies may be useful, for example, in the treatment of proliferative disorders including various tumors and benign hyperplasias.

Polynucleotides or oligonucleotides corresponding to any one portion of the ORFX nucleic acids of SEQ ID NO:2*n*-1 (wherein *n* = 1 to 3161) may be used to detect DNA
5 containing a corresponding ORF gene, or detect the expression of a corresponding ORFX gene, or ORFX-like gene. For example, an ORFX nucleic acid expressed in a particular cell or tissue, as noted in Table 2, can be used to identify the presence of that particular cell type.

An exemplary method for detecting the presence or absence of ORFX in a biological
10 sample involves obtaining a biological sample from a test subject and contacting the biological sample with a compound or an agent capable of detecting ORFX protein or nucleic acid (*e.g.*, mRNA, genomic DNA) that encodes ORFX protein such that the presence of ORFX is detected in the biological sample. An agent for detecting ORFX mRNA or genomic DNA is a labeled nucleic acid probe capable of hybridizing to ORFX mRNA or genomic DNA. The nucleic acid
15 probe can be, for example, a full-length ORFX nucleic acid, such as the nucleic acid of SEQ ID NO:2*n*-1 (wherein *n* = 1 to 3161), or a portion thereof, such as an oligonucleotide of at least 15, 30, 50, 100, 250 or 500 nucleotides in length and sufficient to specifically hybridize under stringent conditions to ORFX mRNA or genomic DNA, as described above. Other suitable probes for use in the diagnostic assays of the invention are described herein.

20 An agent for detecting ORFX protein is an antibody capable of binding to ORFX protein, preferably an antibody with a detectable label. Antibodies can be polyclonal, or more preferably, monoclonal. An intact antibody, or a fragment thereof (*e.g.*, Fab or F(ab')₂) can be used. The term "labeled", with regard to the probe or antibody, is intended to encompass direct labeling of the probe or antibody by coupling (*i.e.*, physically linking) a detectable substance to the probe or
25 antibody, as well as indirect labeling of the probe or antibody by reactivity with another reagent that is directly labeled. Examples of indirect labeling include detection of a primary antibody using a fluorescently labeled secondary antibody and end-labeling of a DNA probe with biotin such that it can be detected with fluorescently labeled streptavidin. The term "biological sample" is intended to include tissues, cells and biological fluids isolated from a subject, as well as
30 tissues, cells and fluids present within a subject. That is, the detection method of the invention can be used to detect ORFX mRNA, protein, or genomic DNA in a biological sample *in vitro* as

well as *in vivo*. For example, *in vitro* techniques for detection of ORFX mRNA include Northern hybridizations and *in situ* hybridizations. *In vitro* techniques for detection of ORFX protein include enzyme linked immunosorbent assays (ELISAs), Western blots, immunoprecipitations and immunofluorescence. *In vitro* techniques for detection of ORFX genomic DNA include Southern hybridizations. Furthermore, *in vivo* techniques for detection of ORFX protein include introducing into a subject a labeled anti-ORFX antibody. For example, the antibody can be labeled with a radioactive marker whose presence and location in a subject can be detected by standard imaging techniques.

In one embodiment, the biological sample contains protein molecules from the test subject. Alternatively, the biological sample can contain mRNA molecules from the test subject or genomic DNA molecules from the test subject. A preferred biological sample is a peripheral blood leukocyte sample isolated by conventional means from a subject.

In another embodiment, the methods further involve obtaining a control biological sample from a control subject, contacting the control sample with a compound or agent capable of detecting ORFX protein, mRNA, or genomic DNA, such that the presence of ORFX protein, mRNA or genomic DNA is detected in the biological sample, and comparing the presence of ORFX protein, mRNA or genomic DNA in the control sample with the presence of ORFX protein, mRNA or genomic DNA in the test sample.

The invention also encompasses kits for detecting the presence of ORFX in a biological sample. For example, the kit can comprise: a labeled compound or agent capable of detecting ORFX protein or mRNA in a biological sample; means for determining the amount of ORFX in the sample; and means for comparing the amount of ORFX in the sample with a standard. The compound or agent can be packaged in a suitable container. The kit can further comprise instructions for using the kit to detect ORFX protein or nucleic acid.

Prognostic Assays

The diagnostic methods described herein can furthermore be utilized to identify subjects having or at risk of developing a disease or disorder associated with aberrant ORFX expression or activity. For example, the assays described herein, such as the preceding diagnostic assays or the following assays, can be utilized to identify a subject having or at risk of developing a disorder associated with ORFX protein, nucleic acid expression or activity in, *e.g.*, proliferative or differentiative disorders such as hyperplasias, tumors, restenosis, psoriasis, Dupuytren's

contracture, diabetic complications, or rheumatoid arthritis, etc.; and glia-associated disorders such as cerebral lesions, diabetic neuropathies, cerebral edema, senile dementia, Alzheimer's disease, etc. Alternatively, the prognostic assays can be utilized to identify a subject having or at risk for developing a disease or disorder. Thus, the present invention provides a method for identifying a disease or disorder associated with aberrant ORFX expression or activity in which a test sample is obtained from a subject and ORFX protein or nucleic acid (*e.g.*, mRNA, genomic DNA) is detected, wherein the presence of ORFX protein or nucleic acid is diagnostic for a subject having or at risk of developing a disease or disorder associated with aberrant ORFX expression or activity. As used herein, a "test sample" refers to a biological sample obtained from a subject of interest. For example, a test sample can be a biological fluid (*e.g.*, serum), cell sample, or tissue.

Furthermore, the prognostic assays described herein can be used to determine whether a subject can be administered an agent (*e.g.*, an agonist, antagonist, peptidomimetic, protein, peptide, nucleic acid, small molecule, or other drug candidate) to treat a disease or disorder associated with aberrant ORFX expression or activity. For example, such methods can be used to determine whether a subject can be effectively treated with an agent for a disorder, such as a proliferative disorder, differentiative disorder, glia-associated disorders, etc. Thus, the present invention provides methods for determining whether a subject can be effectively treated with an agent for a disorder associated with aberrant ORFX expression or activity in which a test sample is obtained and ORFX protein or nucleic acid is detected (*e.g.*, wherein the presence of ORFX protein or nucleic acid is diagnostic for a subject that can be administered the agent to treat a disorder associated with aberrant ORFX expression or activity.)

The methods of the invention can also be used to detect genetic lesions in a ORFX gene, thereby determining if a subject with the lesioned gene is at risk for, or suffers from, a proliferative disorder, differentiative disorder, glia-associated disorder, etc. In various embodiments, the methods include detecting, in a sample of cells from the subject, the presence or absence of a genetic lesion characterized by at least one of an alteration affecting the integrity of a gene encoding a ORFX-protein, or the mis-expression of the ORFX gene. For example, such genetic lesions can be detected by ascertaining the existence of at least one of (1) a deletion of one or more nucleotides from a ORFX gene; (2) an addition of one or more nucleotides to a ORFX gene; (3) a substitution of one or more nucleotides of a ORFX gene, (4) a chromosomal

rearrangement of a ORFX gene; (5) an alteration in the level of a messenger RNA transcript of a ORFX gene, (6) aberrant modification of a ORFX gene, such as of the methylation pattern of the genomic DNA, (7) the presence of a non-wild type splicing pattern of a messenger RNA transcript of a ORFX gene, (8) a non-wild type level of a ORFX-protein, (9) allelic loss of a ORFX gene, and (10) inappropriate post-translational modification of a ORFX-protein. As described herein, there are a large number of assay techniques known in the art which can be used for detecting lesions in a ORFX gene. A preferred biological sample is a peripheral blood leukocyte sample isolated by conventional means from a subject. However, any biological sample containing nucleated cells may be used, including, for example, buccal mucosal cells.

10 In certain embodiments, detection of the lesion involves the use of a probe/primer in a polymerase chain reaction (PCR) (see, *e.g.*, U.S. Pat. Nos. 4,683,195 and 4,683,202), such as anchor PCR or RACE PCR, or, alternatively, in a ligation chain reaction (LCR) (see, *e.g.*, Landegran *et al.* (1988) *Science* 241:1077-1080; and Nakazawa *et al.* (1994) *PNAS* 91:360-364), the latter of which can be particularly useful for detecting point mutations in the ORFX-gene (see Abravaya *et al.* (1995) *Nucl Acids Res* 23:675-682). This method can include the steps of

15 collecting a sample of cells from a patient, isolating nucleic acid (*e.g.*, genomic, mRNA or both) from the cells of the sample, contacting the nucleic acid sample with one or more primers that specifically hybridize to a ORFX gene under conditions such that hybridization and amplification of the ORFX gene (if present) occurs, and detecting the presence or absence of an

20 amplification product, or detecting the size of the amplification product and comparing the length to a control sample. It is anticipated that PCR and/or LCR may be desirable to use as a preliminary amplification step in conjunction with any of the techniques used for detecting mutations described herein.

Alternative amplification methods include: self sustained sequence replication (Guatelli

25 *et al.*, 1990, *Proc Natl Acad Sci USA* 87:1874-1878), transcriptional amplification system (Kwoh, *et al.*, 1989, *Proc Natl Acad Sci USA* 86:1173-1177), Q-Beta Replicase (Lizardi *et al.*, 1988, *BioTechnology* 6:1197), or any other nucleic acid amplification method, followed by the detection of the amplified molecules using techniques well known to those of skill in the art. These detection schemes are especially useful for the detection of nucleic acid molecules if such

30 molecules are present in very low numbers.

In an alternative embodiment, mutations in a ORFX gene from a sample cell can be identified by alterations in restriction enzyme cleavage patterns. For example, sample and control DNA is isolated, amplified (optionally), digested with one or more restriction endonucleases, and fragment length sizes are determined by gel electrophoresis and compared. Differences in fragment length sizes between sample and control DNA indicates mutations in the sample DNA. Moreover, the use of sequence specific ribozymes (see, for example, U.S. Pat. No. 5,493,531) can be used to score for the presence of specific mutations by development or loss of a ribozyme cleavage site.

In other embodiments, genetic mutations in ORFX can be identified by hybridizing a sample and control nucleic acids, *e.g.*, DNA or RNA, to high density arrays containing hundreds or thousands of oligonucleotides probes (Cronin *et al.* (1996) *Human Mutation* 7: 244-255; Kozal *et al.* (1996) *Nature Medicine* 2: 753-759). For example, genetic mutations in ORFX can be identified in two dimensional arrays containing light-generated DNA probes as described in Cronin *et al.* above. Briefly, a first hybridization array of probes can be used to scan through long stretches of DNA in a sample and control to identify base changes between the sequences by making linear arrays of sequential overlapping probes. This step allows the identification of point mutations. This step is followed by a second hybridization array that allows the characterization of specific mutations by using smaller, specialized probe arrays complementary to all variants or mutations detected. Each mutation array is composed of parallel probe sets, one complementary to the wild-type gene and the other complementary to the mutant gene.

In yet another embodiment, any of a variety of sequencing reactions known in the art can be used to directly sequence the ORFX gene and detect mutations by comparing the sequence of the sample ORFX with the corresponding wild-type (control) sequence. Examples of sequencing reactions include those based on techniques developed by Maxim and Gilbert (1977) *PNAS* 74:560 or Sanger (1977) *PNAS* 74:5463. It is also contemplated that any of a variety of automated sequencing procedures can be utilized when performing the diagnostic assays (Naeve *et al.*, (1995) *Biotechniques* 19:448), including sequencing by mass spectrometry (see, *e.g.*, PCT International Publ. No. WO 94/16101; Cohen *et al.* (1996) *Adv Chromatogr* 36:127-162; and Griffin *et al.* (1993) *Appl Biochem Biotechnol* 38:147-159).

Other methods for detecting mutations in the ORFX gene include methods in which protection from cleavage agents is used to detect mismatched bases in RNA/RNA or RNA/DNA

heteroduplexes (Myers *et al.* (1985) *Science* 230:1242). In general, the art technique of "mismatch cleavage" starts by providing heteroduplexes of formed by hybridizing (labeled) RNA or DNA containing the wild-type ORFX sequence with potentially mutant RNA or DNA obtained from a tissue sample. The double-stranded duplexes are treated with an agent that cleaves single-stranded regions of the duplex such as which will exist due to basepair mismatches between the control and sample strands. For instance, RNA/DNA duplexes can be treated with RNase and DNA/DNA hybrids treated with S1 nuclease to enzymatically digesting the mismatched regions. In other embodiments, either DNA/DNA or RNA/DNA duplexes can be treated with hydroxylamine or osmium tetroxide and with piperidine in order to digest mismatched regions. After digestion of the mismatched regions, the resulting material is then separated by size on denaturing polyacrylamide gels to determine the site of mutation. See, for example, Cotton *et al* (1988) *Proc Natl Acad Sci USA* 85:4397; Saleeba *et al* (1992) *Methods Enzymol* 217:286-295. In an embodiment, the control DNA or RNA can be labeled for detection.

In still another embodiment, the mismatch cleavage reaction employs one or more proteins that recognize mismatched base pairs in double-stranded DNA (so called "DNA mismatch repair" enzymes) in defined systems for detecting and mapping point mutations in ORFX cDNAs obtained from samples of cells. For example, the mutY enzyme of *E. coli* cleaves A at G/A mismatches and the thymidine DNA glycosylase from HeLa cells cleaves T at G/T mismatches (Hsu *et al.* (1994) *Carcinogenesis* 15:1657-1662). According to an exemplary embodiment, a probe based on a ORFX sequence, *e.g.*, a wild-type ORFX sequence, is hybridized to a cDNA or other DNA product from a test cell(s). The duplex is treated with a DNA mismatch repair enzyme, and the cleavage products, if any, can be detected from electrophoresis protocols or the like. See, for example, U.S. Pat. No. 5,459,039.

In other embodiments, alterations in electrophoretic mobility will be used to identify mutations in ORFX genes. For example, single strand conformation polymorphism (SSCP) may be used to detect differences in electrophoretic mobility between mutant and wild type nucleic acids (Orita *et al.* (1989) *Proc Natl Acad Sci USA*: 86:2766, see also Cotton (1993) *Mutat Res* 285:125-144; Hayashi (1992) *Genet Anal Tech Appl* 9:73-79). Single-stranded DNA fragments of sample and control ORFX nucleic acids will be denatured and allowed to renature. The secondary structure of single-stranded nucleic acids varies according to sequence, the resulting

alteration in electrophoretic mobility enables the detection of even a single base change. The DNA fragments may be labeled or detected with labeled probes. The sensitivity of the assay may be enhanced by using RNA, rather than DNA, in which the secondary structure is more sensitive to a change in sequence. In one embodiment, the subject method utilizes heteroduplex analysis to separate double stranded heteroduplex molecules on the basis of changes in electrophoretic mobility. See, e.g., Keen *et al.* (1991) *Trends Genet* 7:5.

In yet another embodiment the movement of mutant or wild-type fragments in polyacrylamide gels containing a gradient of denaturant is assayed using denaturing gradient gel electrophoresis (DGGE). See, e.g., Myers *et al.* (1985) *Nature* 313:495. When DGGE is used as the method of analysis, DNA will be modified to insure that it does not completely denature, for example by adding a GC clamp of approximately 40 bp of high-melting GC-rich DNA by PCR. In a further embodiment, a temperature gradient is used in place of a denaturing gradient to identify differences in the mobility of control and sample DNA. See, e.g., Rosenbaum and Reissner (1987) *Biophys Chem* 265:12753.

Examples of other techniques for detecting point mutations include, but are not limited to, selective oligonucleotide hybridization, selective amplification, or selective primer extension. For example, oligonucleotide primers may be prepared in which the known mutation is placed centrally and then hybridized to target DNA under conditions that permit hybridization only if a perfect match is found. See, e.g., Saiki *et al.* (1986) *Nature* 324:163; Saiki *et al.* (1989) *Proc Natl Acad. Sci USA* 86:6230. Such allele specific oligonucleotides are hybridized to PCR amplified target DNA or a number of different mutations when the oligonucleotides are attached to the hybridizing membrane and hybridized with labeled target DNA.

Alternatively, allele specific amplification technology that depends on selective PCR amplification may be used in conjunction with the instant invention. Oligonucleotides used as primers for specific amplification may carry the mutation of interest in the center of the molecule (so that amplification depends on differential hybridization) (Gibbs *et al.* (1989) *Nucleic Acids Res* 17:2437-2448) or at the extreme 3' end of one primer where, under appropriate conditions, mismatch can prevent, or reduce polymerase extension (Prossner (1993) *Tibtech* 11:238). In addition it may be desirable to introduce a novel restriction site in the region of the mutation to create cleavage-based detection. See, e.g., Gasparini *et al.* (1992) *Mol Cell Probes* 6:1. It is anticipated that in certain embodiments amplification may also be performed using Taq ligase

for amplification. See, *e.g.*, Barany (1991) *Proc Natl Acad Sci USA* 88:189. In such cases, ligation will occur only if there is a perfect match at the 3' end of the 5' sequence, making it possible to detect the presence of a known mutation at a specific site by looking for the presence or absence of amplification.

5 The methods described herein may be performed, for example, by utilizing pre-packaged diagnostic kits comprising at least one probe nucleic acid or antibody reagent described herein, which may be conveniently used, *e.g.*, in clinical settings to diagnose patients exhibiting symptoms or family history of a disease or illness involving a ORFX gene.

10 Furthermore, any cell type or tissue, preferably peripheral blood leukocytes, in which ORFX is expressed may be utilized in the prognostic assays described herein. However, any biological sample containing nucleated cells may be used, including, for example, buccal mucosal cells.

Pharmacogenomics

15 Agents, or modulators that have a stimulatory or inhibitory effect on ORFX activity (*e.g.*, ORFX gene expression), as identified by a screening assay described herein can be administered to individuals to treat (prophylactically or therapeutically) disorders (*e.g.*, neurological, cancer-related or gestational disorders) associated with aberrant ORFX activity. In conjunction with such treatment, the pharmacogenomics (*i.e.*, the study of the relationship between an individual's genotype and that individual's response to a foreign compound or drug) of the individual may be
20 considered. Differences in metabolism of therapeutics can lead to severe toxicity or therapeutic failure by altering the relation between dose and blood concentration of the pharmacologically active drug. Thus, the pharmacogenomics of the individual permits the selection of effective agents (*e.g.*, drugs) for prophylactic or therapeutic treatments based on a consideration of the individual's genotype. Such pharmacogenomics can further be used to determine appropriate
25 dosages and therapeutic regimens. Accordingly, the activity of ORFX protein, expression of ORFX nucleic acid, or mutation content of ORFX genes in an individual can be determined to thereby select appropriate agent(s) for therapeutic or prophylactic treatment of the individual.

30 Pharmacogenomics deals with clinically significant hereditary variations in the response to drugs due to altered drug disposition and abnormal action in affected persons. See *e.g.*, Eichelbaum, 1996, *Clin Exp Pharmacol Physiol*, 23:983-985 and Linder, 1997, *Clin Chem*, 43:254-266. In general, two types of pharmacogenetic conditions can be differentiated. Genetic

conditions transmitted as a single factor altering the way drugs act on the body (altered drug action) or genetic conditions transmitted as single factors altering the way the body acts on drugs (altered drug metabolism). These pharmacogenetic conditions can occur either as rare defects or as polymorphisms. For example, glucose-6-phosphate dehydrogenase (G6PD) deficiency is a common inherited enzymopathy in which the main clinical complication is haemolysis after ingestion of oxidant drugs (anti-malarials, sulfonamides, analgesics, nitrofurans) and consumption of fava beans.

As an illustrative embodiment, the activity of drug metabolizing enzymes is a major determinant of both the intensity and duration of drug action. The discovery of genetic polymorphisms of drug metabolizing enzymes (*e.g.*, N-acetyltransferase 2 (NAT 2) and cytochrome P450 enzymes CYP2D6 and CYP2C19) has provided an explanation as to why some patients do not obtain the expected drug effects or show exaggerated drug response and serious toxicity after taking the standard and safe dose of a drug. These polymorphisms are expressed in two phenotypes in the population, the extensive metabolizer (EM) and poor metabolizer (PM). The prevalence of PM is different among different populations. For example, the gene coding for CYP2D6 is highly polymorphic and several mutations have been identified in PM, which all lead to the absence of functional CYP2D6. Poor metabolizers of CYP2D6 and CYP2C19 quite frequently experience exaggerated drug response and side effects when they receive standard doses. If a metabolite is the active therapeutic moiety, PM show no therapeutic response, as demonstrated for the analgesic effect of codeine mediated by its CYP2D6-formed metabolite morphine. The other extreme are the so called ultra-rapid metabolizers who do not respond to standard doses. Recently, the molecular basis of ultra-rapid metabolism has been identified to be due to CYP2D6 gene amplification.

Thus, the activity of ORFX protein, expression of ORFX nucleic acid, or mutation content of ORFX genes in an individual can be determined to thereby select appropriate agent(s) for therapeutic or prophylactic treatment of the individual. In addition, pharmacogenetic studies can be used to apply genotyping of polymorphic alleles encoding drug-metabolizing enzymes to the identification of an individual's drug responsiveness phenotype. This knowledge, when applied to dosing or drug selection, can avoid adverse reactions or therapeutic failure and thus enhance therapeutic or prophylactic efficiency when treating a subject with a ORFX modulator, such as a modulator identified by one of the exemplary screening assays described herein.

Monitoring Clinical Efficacy

Monitoring the influence of agents (*e.g.*, drugs, compounds) on the expression or activity of ORFX (*e.g.*, the ability to modulate aberrant cell proliferation and/or differentiation) can be applied in basic drug screening and in clinical trials. For example, the effectiveness of an agent
5 determined by a screening assay as described herein to increase ORFX gene expression, protein levels, or upregulate ORFX activity, can be monitored in clinical trials of subjects exhibiting decreased ORFX gene expression, protein levels, or downregulated ORFX activity.

Alternatively, the effectiveness of an agent determined by a screening assay to decrease ORFX gene expression, protein levels, or downregulate ORFX activity, can be monitored in clinical
10 trials of subjects exhibiting increased ORFX gene expression, protein levels, or upregulated ORFX activity. In such clinical trials, the expression or activity of ORFX and, preferably, other genes that have been implicated in, for example, a proliferative or neurological disorder, can be used as a "read out" or marker of the responsiveness of a particular cell.

For example, genes, including ORFX, that are modulated in cells by treatment with an
15 agent (*e.g.*, compound, drug or small molecule) that modulates ORFX activity (*e.g.*, identified in a screening assay as described herein) can be identified. Thus, to study the effect of agents on cellular proliferation disorders, for example, in a clinical trial, cells can be isolated and RNA prepared and analyzed for the levels of expression of ORFX and other genes implicated in the disorder. The levels of gene expression (*i.e.*, a gene expression pattern) can be quantified by
20 Northern blot analysis or RT-PCR, as described herein, or alternatively by measuring the amount of protein produced, by one of the methods as described herein, or by measuring the levels of activity of ORFX or other genes. In this way, the gene expression pattern can serve as a marker, indicative of the physiological response of the cells to the agent. Accordingly, this response state may be determined before, and at various points during, treatment of the individual with the
25 agent.

In one embodiment, the invention provides a method for monitoring the effectiveness of treatment of a subject with an agent (*e.g.*, an agonist, antagonist, protein, peptide, nucleic acid, peptidomimetic, small molecule, or other drug candidate identified by the screening assays described herein) comprising the steps of (i) obtaining a pre-administration sample from a
30 subject prior to administration of the agent; (ii) detecting the level of expression of a ORFX protein, mRNA, or genomic DNA in the preadministration sample; (iii) obtaining one or more

post-administration samples from the subject; (iv) detecting the level of expression or activity of the ORFX protein, mRNA, or genomic DNA in the post-administration samples; (v) comparing the level of expression or activity of the ORFX protein, mRNA, or genomic DNA in the pre-administration sample with the ORFX protein, mRNA, or genomic DNA in the post administration sample or samples; and (vi) altering the administration of the agent to the subject accordingly. For example, increased administration of the agent may be desirable to increase the expression or activity of ORFX to higher levels than detected, *i.e.*, to increase the effectiveness of the agent. Alternatively, decreased administration of the agent may be desirable to decrease expression or activity of ORFX to lower levels than detected, *i.e.*, to decrease the effectiveness of the agent.

Methods of Treatment

The present invention provides for both prophylactic and therapeutic methods of treating a subject at risk of (or susceptible to) a disorder or having a disorder associated with aberrant ORFX expression or activity.

Diseases and disorders that are characterized by increased (relative to a subject not suffering from the disease or disorder) levels or biological activity may be treated with Therapeutics that antagonize (*i.e.*, reduce or inhibit) activity. Therapeutics that antagonize activity may be administered in a therapeutic or prophylactic manner. Therapeutics that may be utilized include, but are not limited to, (i) a ORFX polypeptide, or analogs, derivatives, fragments or homologs thereof; (ii) antibodies to a ORFX peptide; (iii) nucleic acids encoding a ORFX peptide; (iv) administration of antisense nucleic acid and nucleic acids that are "dysfunctional" (*i.e.*, due to a heterologous insertion within the coding sequences of coding sequences to a ORFX peptide) that are utilized to "knockout" endogenous function of a ORFX peptide by homologous recombination (see, *e.g.*, Capecchi, 1989, *Science* 244: 1288-1292); or (v) modulators (*i.e.*, inhibitors, agonists and antagonists, including additional peptide mimetic of the invention or antibodies specific to a peptide of the invention) that alter the interaction between a ORFX peptide and its binding partner.

Diseases and disorders that are characterized by decreased (relative to a subject not suffering from the disease or disorder) levels or biological activity may be treated with Therapeutics that increase (*i.e.*, are agonists to) activity. Therapeutics that upregulate activity may be administered in a therapeutic or prophylactic manner. Therapeutics that may be utilized

include, but are not limited to, a ORFX peptide, or analogs, derivatives, fragments or homologs thereof; or an agonist that increases bioavailability.

Increased or decreased levels can be readily detected by quantifying peptide and/or RNA, by obtaining a patient tissue sample (*e.g.*, from biopsy tissue) and assaying it *in vitro* for RNA or peptide levels, structure and/or activity of the expressed peptides (or mRNAs of a ORFX peptide). Methods that are well-known within the art include, but are not limited to, immunoassays (*e.g.*, by Western blot analysis, immunoprecipitation followed by sodium dodecyl sulfate (SDS) polyacrylamide gel electrophoresis, immunocytochemistry, etc.) and/or hybridization assays to detect expression of mRNAs (*e.g.*, Northern assays, dot blots, *in situ* hybridization, etc.).

In one aspect, the invention provides a method for preventing, in a subject, a disease or condition associated with an aberrant ORFX expression or activity, by administering to the subject an agent that modulates ORFX expression or at least one ORFX activity. Subjects at risk for a disease that is caused or contributed to by aberrant ORFX expression or activity can be identified by, for example, any or a combination of diagnostic or prognostic assays as described herein. Administration of a prophylactic agent can occur prior to the manifestation of symptoms characteristic of the ORFX aberrancy, such that a disease or disorder is prevented or, alternatively, delayed in its progression. Depending on the type of ORFX aberrancy, for example, a ORFX agonist or ORFX antagonist agent can be used for treating the subject. The appropriate agent can be determined based on screening assays described herein.

Another aspect of the invention pertains to methods of modulating ORFX expression or activity for therapeutic purposes. The modulatory method of the invention involves contacting a cell with an agent that modulates one or more of the activities of ORFX protein activity associated with the cell. An agent that modulates ORFX protein activity can be an agent as described herein, such as a nucleic acid or a protein, a naturally-occurring cognate ligand of a ORFX protein, a peptide, a ORFX peptidomimetic, or other small molecule. In one embodiment, the agent stimulates one or more ORFX protein activity. Examples of such stimulatory agents include active ORFX protein and a nucleic acid molecule encoding ORFX that has been introduced into the cell. In another embodiment, the agent inhibits one or more ORFX protein activity. Examples of such inhibitory agents include antisense ORFX nucleic acid molecules and anti-ORFX antibodies. These modulatory methods can be performed *in vitro*

(*e.g.*, by culturing the cell with the agent) or, alternatively, *in vivo* (*e.g.*, by administering the agent to a subject). As such, the present invention provides methods of treating an individual afflicted with a disease or disorder characterized by aberrant expression or activity of a ORFX protein or nucleic acid molecule. In one embodiment, the method involves administering an agent (*e.g.*, an agent identified by a screening assay described herein), or combination of agents that modulates (*e.g.*, upregulates or downregulates) ORFX expression or activity. In another embodiment, the method involves administering a ORFX protein or nucleic acid molecule as therapy to compensate for reduced or aberrant ORFX expression or activity.

Determination of the Biological Effect of a Therapeutic

In various embodiments of the present invention, suitable *in vitro* or *in vivo* assays are utilized to determine the effect of a specific Therapeutic and whether its administration is indicated for treatment of the affected tissue.

In various specific embodiments, *in vitro* assays may be performed with representative cells of the type(s) involved in the patient's disorder, to determine if a given Therapeutic exerts the desired effect upon the cell type(s). Compounds for use in therapy may be tested in suitable animal model systems including, but not limited to rats, mice, chicken, cows, monkeys, rabbits, and the like, prior to testing in human subjects. Similarly, for *in vivo* testing, any of the animal model system known in the art may be used prior to administration to human subjects.

Malignancies

Some ORFX polypeptides are expressed in cancerous cells (*see, e.g.*, Tables 1 and 2). Accordingly, the corresponding ORF protein is involved in the regulation of cell proliferation. Accordingly, Therapeutics of the present invention may be useful in the therapeutic or prophylactic treatment of diseases or disorders that are associated with cell hyperproliferation and/or loss of control of cell proliferation (*e.g.*, cancers, malignancies and tumors). For a review of such hyperproliferation disorders, *see e.g.*, Fishman, *et al.*, 1985. MEDICINE, 2nd ed., J.B. Lippincott Co., Philadelphia, PA.

Therapeutics of the present invention may be assayed by any method known within the art for efficacy in treating or preventing malignancies and related disorders. Such assays include,

but are not limited to, *in vitro* assays utilizing transformed cells or cells derived from the patient's tumor, as well as *in vivo* assays using animal models of cancer or malignancies. Potentially effective Therapeutics are those that, for example, inhibit the proliferation of tumor-derived or transformed cells in culture or cause a regression of tumors in animal models, in comparison to the controls.

In the practice of the present invention, once a malignancy or cancer has been shown to be amenable to treatment by modulating (*i.e.*, inhibiting, antagonizing or agonizing) activity, that cancer or malignancy may subsequently be treated or prevented by the administration of a Therapeutic that serves to modulate protein function.

10 Premalignant conditions

The Therapeutics of the present invention that are effective in the therapeutic or prophylactic treatment of cancer or malignancies may also be administered for the treatment of pre-malignant conditions and/or to prevent the progression of a pre-malignancy to a neoplastic or malignant state. Such prophylactic or therapeutic use is indicated in conditions known or suspected of preceding progression to neoplasia or cancer, in particular, where non-neoplastic cell growth consisting of hyperplasia, metaplasia or, most particularly, dysplasia has occurred. For a review of such abnormal cell growth see *e.g.*, Robbins & Angell, 1976. BASIC PATHOLOGY, 2nd ed., W.B. Saunders Co., Philadelphia, PA.

Hyperplasia is a form of controlled cell proliferation involving an increase in cell number in a tissue or organ, without significant alteration in its structure or function. For example, it has been demonstrated that endometrial hyperplasia often precedes endometrial cancer. Metaplasia is a form of controlled cell growth in which one type of mature or fully differentiated cell substitutes for another type of mature cell. Metaplasia may occur in epithelial or connective tissue cells. Dysplasia is generally considered a precursor of cancer, and is found mainly in the epithelia. Dysplasia is the most disorderly form of non-neoplastic cell growth, and involves a loss in individual cell uniformity and in the architectural orientation of cells. Dysplasia characteristically occurs where there exists chronic irritation or inflammation, and is often found in the cervix, respiratory passages, oral cavity, and gall bladder.

Alternatively, or in addition to the presence of abnormal cell growth characterized as hyperplasia, metaplasia, or dysplasia, the presence of one or more characteristics of a transformed or malignant phenotype displayed either *in vivo* or *in vitro* within a cell sample derived from a patient, is indicative of the desirability of prophylactic/therapeutic administration of a Therapeutic that possesses the ability to modulate activity of An aforementioned protein. Characteristics of a transformed phenotype include, but are not limited to: (i) morphological changes; (ii) looser substratum attachment; (iii) loss of cell-to-cell contact inhibition; (iv) loss of anchorage dependence; (v) protease release; (vi) increased sugar transport; (vii) decreased serum requirement; (viii) expression of fetal antigens, (ix) disappearance of the 250 kDal cell-surface protein, and the like. See *e.g.*, Richards, *et al.*, 1986. MOLECULAR PATHOLOGY, W.B. Saunders Co., Philadelphia, PA.

In a specific embodiment of the present invention, a patient that exhibits one or more of the following predisposing factors for malignancy is treated by administration of an effective amount of a Therapeutic: (i) a chromosomal translocation associated with a malignancy (*e.g.*, the Philadelphia chromosome (*bcr/abl*) for chronic myelogenous leukemia and t(14;18) for follicular lymphoma, etc.); (ii) familial polyposis or Gardner's syndrome (possible forerunners of colon cancer); (iii) monoclonal gammopathy of undetermined significance (a possible precursor of multiple myeloma) and (iv) a first degree kinship with persons having a cancer or pre-cancerous disease showing a Mendelian (genetic) inheritance pattern (*e.g.*, familial polyposis of the colon, Gardner's syndrome, hereditary exostosis, polyendocrine adenomatosis, Peutz-Jeghers syndrome, neurofibromatosis of Von Recklinghausen, medullary thyroid carcinoma with amyloid production and pheochromocytoma, retinoblastoma, carotid body tumor, cutaneous melanocarcinoma, intraocular melanocarcinoma, xeroderma pigmentosum, ataxia telangiectasia, Chediak-Higashi syndrome, albinism, Fanconi's aplastic anemia and Bloom's syndrome).

In another embodiment, a Therapeutic of the present invention is administered to a human patient to prevent the progression to breast, colon, lung, pancreatic, or uterine cancer, or melanoma or sarcoma.

Hyperproliferative and dysproliferative disorders

In one embodiment of the present invention, a Therapeutic is administered in the therapeutic or prophylactic treatment of hyperproliferative or benign dysproliferative disorders. The efficacy in treating or preventing hyperproliferative diseases or disorders of a Therapeutic of the present invention may be assayed by any method known within the art. Such assays include *in vitro* cell proliferation assays, *in vitro* or *in vivo* assays using animal models of hyperproliferative diseases or disorders, or the like. Potentially effective Therapeutics may, for example, promote cell proliferation in culture or cause growth or cell proliferation in animal models in comparison to controls.

Specific embodiments of the present invention are directed to the treatment or prevention of cirrhosis of the liver (a condition in which scarring has overtaken normal liver regeneration processes); treatment of keloid (hypertrophic scar) formation causing disfiguring of the skin in which the scarring process interferes with normal renewal; psoriasis (a common skin condition characterized by excessive proliferation of the skin and delay in proper cell fate determination); benign tumors; fibrocystic conditions and tissue hypertrophy (*e.g.*, benign prostatic hypertrophy).

Neurodegenerative disorders

Some ORFX proteins are found in cell types have been implicated in the deregulation of cellular maturation and apoptosis, which are both characteristic of neurodegenerative disease. Accordingly, Therapeutics of the invention, particularly but not limited to those that modulate (or supply) activity of an aforementioned protein, may be effective in treating or preventing neurodegenerative disease. Therapeutics of the present invention that modulate the activity of an aforementioned protein involved in neurodegenerative disorders can be assayed by any method known in the art for efficacy in treating or preventing such neurodegenerative diseases and disorders. Such assays include *in vitro* assays for regulated cell maturation or inhibition of apoptosis or *in vivo* assays using animal models of neurodegenerative diseases or disorders, or any of the assays described below. Potentially effective Therapeutics, for example but not by way of limitation, promote regulated cell maturation and prevent cell apoptosis in culture, or reduce neurodegeneration in animal models in comparison to controls.

Once a neurodegenerative disease or disorder has been shown to be amenable to treatment by modulation activity, that neurodegenerative disease or disorder can be treated or prevented by administration of a Therapeutic that modulates activity. Such diseases include all degenerative disorders involved with aging, especially osteoarthritis and neurodegenerative disorders.

Disorders related to organ transplantation

Some ORFX can be associated with disorders related to organ transplantation, in particular but not limited to organ rejection. Therapeutics of the invention, particularly those that modulate (or supply) activity, may be effective in treating or preventing diseases or disorders related to organ transplantation. Therapeutics of the invention (particularly Therapeutics that modulate the levels or activity of an aforementioned protein) can be assayed by any method known in the art for efficacy in treating or preventing such diseases and disorders related to organ transplantation. Such assays include *in vitro* assays for using cell culture models as described below, or *in vivo* assays using animal models of diseases and disorders related to organ transplantation, see *e.g.*, below. Potentially effective Therapeutics, for example but not by way of limitation, reduce immune rejection responses in animal models in comparison to controls.

Accordingly, once diseases and disorders related to organ transplantation are shown to be amenable to treatment by modulation of activity, such diseases or disorders can be treated or prevented by administration of a Therapeutic that modulates activity.

Cardiovascular Disease

GENX has been implicated in cardiovascular disorders, including in atherosclerotic plaque formation. Diseases such as cardiovascular disease, including cerebral thrombosis or hemorrhage, ischemic heart or renal disease, peripheral vascular disease, or thrombosis of other major vessel, and other diseases, including diabetes mellitus, hypertension, hypothyroidism, cholesterol ester storage disease, systemic lupus erythematosus, homocysteinemia, and familial protein or lipid processing diseases, and the like, are either directly or indirectly associated with atherosclerosis. Accordingly, Therapeutics of the invention, particularly those that modulate (or supply) activity or formation may be effective in treating or preventing

atherosclerosis-associated diseases or disorders. Therapeutics of the invention (particularly Therapeutics that modulate the levels or activity) can be assayed by any method known in the art, including those described below, for efficacy in treating or preventing such diseases and disorders.

5 A vast array of animal and cell culture models exist for processes involved in atherosclerosis. A limited and non-exclusive list of animal models includes knockout mice for premature atherosclerosis (Kurabayashi and Yazaki, 1996, *Int. Angiol.* 15: 187-194), transgenic mouse models of atherosclerosis (Kappel *et al.*, 1994, *FASEB J.* 8: 583-592), antisense oligonucleotide treatment of animal models (Callow, 1995, *Curr. Opin. Cardiol.* 10: 569-576),
10 transgenic rabbit models for atherosclerosis (Taylor, 1997, *Ann. N.Y. Acad. Sci.* 811: 146-152), hypercholesterolemic animal models (Rosenfeld, 1996, *Diabetes Res. Clin. Pract.* 30 Suppl.: 1-11), hyperlipidemic mice (Paigen *et al.*, 1994, *Curr. Opin. Lipidol.* 5: 258-264), and inhibition of lipoxygenase in animals (Sigal *et al.*, 1994, *Ann. N.Y. Acad. Sci.* 714: 211-224). In addition, *in vitro* cell models include but are not limited to monocytes exposed to low density lipoprotein
15 (Frostegard *et al.*, 1996, *Atherosclerosis* 121: 93-103), cloned vascular smooth muscle cells (Suttles *et al.*, 1995, *Exp. Cell Res.* 218: 331-338), endothelial cell-derived chemoattractant exposed T cells (Katz *et al.*, 1994, *J. Leukoc. Biol.* 55: 567-573), cultured human aortic endothelial cells (Farber *et al.*, 1992, *Am. J. Physiol.* 262: H1088-1085), and foam cell cultures (Libby *et al.*, 1996, *Curr Opin Lipidol* 7: 330-335). Potentially effective Therapeutics, for
20 example but not by way of limitation, reduce foam cell formation in cell culture models, or reduce atherosclerotic plaque formation in hypercholesterolemic mouse models of atherosclerosis in comparison to controls.

 Accordingly, once an atherosclerosis-associated disease or disorder has been shown to be amenable to treatment by modulation of activity or formation, that disease or disorder can be
25 treated or prevented by administration of a Therapeutic that modulates activity.

Cytokine and Cell Proliferation/Differentiation Activity

 A GENX protein of the present invention may exhibit cytokine, cell proliferation (either inducing or inhibiting) or cell differentiation (either inducing or inhibiting) activity or may induce production of other cytokines in certain cell populations. Many protein factors discovered

to date, including all known cytokines, have exhibited activity in one or more factor dependent cell proliferation assays, and hence the assays serve as a convenient confirmation of cytokine activity. The activity of a protein of the present invention is evidenced by any one of a number of routine factor dependent cell proliferation assays for cell lines including, without limitation, 32D,
5 DA2, DA1G, T10, B9, B9/11, BaF3, MC9/G, M+ (preB M+), 2E8, RB5, DA1, 123, T1165, HT2, CTLL2, TF-1, Mo7e and CMK.

The activity of a protein of the invention may, among other means, be measured by the following methods: Assays for T-cell or thymocyte proliferation include without limitation those described in: CURRENT PROTOCOLS IN IMMUNOLOGY, Ed by Coligan *et al.*, Greene Publishing
10 Associates and Wiley-Interscience (Chapter 3 and Chapter 7); Takai *et al.*, *J Immunol* 137:3494-3500, 1986; Bertagnoli *et al.*, *J Immunol* 145:1706-1712, 1990; Bertagnoli *et al.*, *Cell Immunol* 133:327-341, 1991; Bertagnoli, *et al.*, *J Immunol* 149:3778-3783, 1992; Bowman *et al.*, *J Immunol* 152:1756-1761, 1994.

Assays for cytokine production and/or proliferation of spleen cells, lymph node cells or
15 thymocytes include, without limitation, those described by Kruisbeek and Shevach, In: CURRENT PROTOCOLS IN IMMUNOLOGY. Coligan *et al.*, eds. Vol 1, pp. 3.12.1-14, John Wiley and Sons, Toronto 1994; and by Schreiber, In: CURRENT PROTOCOLS IN IMMUNOLOGY. Coligan eds. Vol 1 pp. 6.8.1-8, John Wiley and Sons, Toronto 1994.

Assays for proliferation and differentiation of hematopoietic and lymphopoietic cells
20 include, without limitation, those described by Bottomly *et al.*, In: CURRENT PROTOCOLS IN IMMUNOLOGY. Coligan *et al.*, eds. Vol 1 pp. 6.3.1-6.3.12, John Wiley and Sons, Toronto 1991; deVries *et al.*, *J Exp Med* 173:1205-1211, 1991; Moreau *et al.*, *Nature* 336:690-692, 1988; Greenberger *et al.*, *Proc Natl Acad Sci U.S.A.* 80:2931-2938, 1983; Nordan, In: CURRENT PROTOCOLS IN IMMUNOLOGY. Coligan *et al.*, eds. Vol 1 pp. 6.6.1-5, John Wiley and Sons,
25 Toronto 1991; Smith *et al.*, *Proc Natl Acad Sci U.S.A.* 83:1857-1861, 1986; Measurement of human Interleukin 11-Bennett, *et al.* In: CURRENT PROTOCOLS IN IMMUNOLOGY. Coligan *et al.*, eds. Vol 1 pp. 6.15.1 John Wiley and Sons, Toronto 1991; Ciarletta, *et al.*, In: CURRENT PROTOCOLS IN IMMUNOLOGY. Coligan *et al.*, eds. Vol 1 pp. 6.13.1, John Wiley and Sons, Toronto 1991.

30 Assays for T-cell clone responses to antigens (which will identify, among others, proteins that affect APC-T cell interactions as well as direct T-cell effects by measuring proliferation and

cytokine production) include, without limitation, those described In: CURRENT PROTOCOLS IN IMMUNOLOGY. Coligan *et al.*, eds., Greene Publishing Associates and Wiley-Interscience. (Chapter 3Chapter 6, Chapter 7); Weinberger *et al.*, *Proc Natl Acad Sci USA* 77:6091-6095, 1980; Weinberger *et al.*, *Eur J Immunol* 11:405-411, 1981; Takai *et al.*, *J Immunol* 137:3494-3500, 1986; Takai *et al.*, *J Immunol* 140:508-512, 1988.

Immune Stimulating or Suppressing Activity

A GENX protein of the present invention may also exhibit immune stimulating or immune suppressing activity, including without limitation the activities for which assays are described herein. A protein may be useful in the treatment of various immune deficiencies and disorders (including severe combined immunodeficiency (SCID)), *e.g.*, in regulating (up or down) growth and proliferation of T and/or B lymphocytes, as well as effecting the cytolytic activity of NK cells and other cell populations. These immune deficiencies may be genetic or be caused by vital (*e.g.*, HIV) as well as bacterial or fungal infections, or may result from autoimmune disorders. More specifically, infectious diseases causes by vital, bacterial, fungal or other infection may be treatable using a protein of the present invention, including infections by HIV, hepatitis viruses, herpesviruses, mycobacteria, Leishmania species., malaria species. and various fungal infections such as candidiasis. Of course, in this regard, a protein of the present invention may also be useful where a boost to the immune system generally may be desirable, *i.e.*, in the treatment of cancer.

Autoimmune disorders which may be treated using a protein of the present invention include, for example, connective tissue disease, multiple sclerosis, systemic lupus erythematosus, rheumatoid arthritis, autoimmune pulmonary inflammation, Guillain-Barre syndrome, autoimmune thyroiditis, insulin dependent diabetes mellitus, myasthenia gravis, graft-versus-host disease and autoimmune inflammatory eye disease. Such a protein of the present invention may also to be useful in the treatment of allergic reactions and conditions, such as asthma (particularly allergic asthma) or other respiratory problems. Other conditions, in which immune suppression is desired (including, for example, organ transplantation), may also be treatable using a protein of the present invention.

Using the proteins of the invention it may also be possible to immune responses, in a number of ways. Down regulation may be in the form of inhibiting or blocking an immune response already in progress or may involve preventing the induction of an immune response.

The functions of activated T cells may be inhibited by suppressing T cell responses or by inducing specific tolerance in T cells, or both. Immunosuppression of T cell responses is generally an active, non-antigen-specific, process which requires continuous exposure of the T cells to the suppressive agent. Tolerance, which involves inducing non-responsiveness or energy in T cells, is distinguishable from immunosuppression in that it is generally antigen-specific and persists after exposure to the tolerizing agent has ceased. Operationally, tolerance can be demonstrated by the lack of a T cell response upon re-exposure to specific antigen in the absence of the tolerizing agent.

Down regulating or preventing one or more antigen functions (including without limitation B lymphocyte antigen functions (such as, for example, B7), *e.g.*, preventing high level lymphokine synthesis by activated T cells, will be useful in situations of tissue, skin and organ transplantation and in graft-versus-host disease (GVHD). For example, blockage of T cell function should result in reduced tissue destruction in tissue transplantation. Typically, in tissue transplants, rejection of the transplant is initiated through its recognition as foreign by T cells, followed by an immune reaction that destroys the transplant. The administration of a molecule which inhibits or blocks interaction of a B7 lymphocyte antigen with its natural ligand(s) on immune cells (such as a soluble, monomeric form of a peptide having B7-2 activity alone or in conjunction with a monomeric form of a peptide having an activity of another B lymphocyte antigen (*e.g.*, B7-1, B7-3) or blocking antibody), prior to transplantation can lead to the binding of the molecule to the natural ligand(s) on the immune cells without transmitting the corresponding costimulatory signal. Blocking B lymphocyte antigen function in this manner prevents cytokine synthesis by immune cells, such as T cells, and thus acts as an immunosuppressant. Moreover, the lack of costimulation may also be sufficient to energize the T cells, thereby inducing tolerance in a subject. Induction of long-term tolerance by B lymphocyte antigen-blocking reagents may avoid the necessity of repeated administration of these blocking reagents. To achieve sufficient immunosuppression or tolerance in a subject, it may also be necessary to block the function of B lymphocyte antigens.

The efficacy of particular blocking reagents in preventing organ transplant rejection or GVHD can be assessed using animal models that are predictive of efficacy in humans. Examples of appropriate systems which can be used include allogeneic cardiac grafts in rats and xenogeneic pancreatic islet cell grafts in mice, both of which have been used to examine the

immunosuppressive effects of CTLA4Ig fusion proteins *in vivo* as described in Lenschow *et al.*, Science 257:789-792 (1992) and Turka *et al.*, Proc Natl Acad Sci USA, 89:11102-11105 (1992). In addition, murine models of GVHD (see Paul ed., FUNDAMENTAL IMMUNOLOGY, Raven Press, New York, 1989, pp. 846-847) can be used to determine the effect of blocking B lymphocyte antigen function *in vivo* on the development of that disease.

Blocking antigen function may also be therapeutically useful for treating autoimmune diseases. Many autoimmune disorders are the result of inappropriate activation of T cells that are reactive against self tissue and which promote the production of cytokines and auto-antibodies involved in the pathology of the diseases. Preventing the activation of autoreactive T cells may reduce or eliminate disease symptoms. Administration of reagents which block costimulation of T cells by disrupting receptor:ligand interactions of B lymphocyte antigens can be used to inhibit T cell activation and prevent production of auto-antibodies or T cell-derived cytokines which may be involved in the disease process. Additionally, blocking reagents may induce antigen-specific tolerance of autoreactive T cells which could lead to long-term relief from the disease. The efficacy of blocking reagents in preventing or alleviating autoimmune disorders can be determined using a number of well-characterized animal models of human autoimmune diseases. Examples include murine experimental autoimmune encephalitis, systemic lupus erythematosus in MRL/lpr/lpr mice or NZB hybrid mice, murine autoimmune collagen arthritis, diabetes mellitus in NOD mice and BB rats, and murine experimental myasthenia gravis (see Paul ed., FUNDAMENTAL IMMUNOLOGY, Raven Press, New York, 1989, pp. 840-856).

Upregulation of an antigen function (preferably a B lymphocyte antigen function), as a means of up regulating immune responses, may also be useful in therapy. Upregulation of immune responses may be in the form of enhancing an existing immune response or eliciting an initial immune response. For example, enhancing an immune response through stimulating B lymphocyte antigen function may be useful in cases of viral infection. In addition, systemic viral diseases such as influenza, the common cold, and encephalitis might be alleviated by the administration of stimulatory forms of B lymphocyte antigens systemically.

Alternatively, anti-viral immune responses may be enhanced in an infected patient by removing T cells from the patient, costimulating the T cells *in vitro* with viral antigen-pulsed APCs either expressing a peptide of the present invention or together with a stimulatory form of a soluble peptide of the present invention and reintroducing the *in vitro* activated T cells into the

patient. Another method of enhancing anti-vital immune responses would be to isolate infected cells from a patient, transfect them with a nucleic acid encoding a protein of the present invention as described herein such that the cells express all or a portion of the protein on their surface, and reintroduce the transfected cells into the patient. The infected cells would now be
5 capable of delivering a costimulatory signal to, and thereby activate, T cells *in vivo*.

In another application, up regulation or enhancement of antigen function (preferably B lymphocyte antigen function) may be useful in the induction of tumor immunity. Tumor cells (e.g., sarcoma, melanoma, lymphoma, leukemia, neuroblastoma, carcinoma) transfected with a nucleic acid encoding at least one peptide of the present invention can be administered to a
10 subject to overcome tumor-specific tolerance in the subject. If desired, the tumor cell can be transfected to express a combination of peptides. For example, tumor cells obtained from a patient can be transfected *ex vivo* with an expression vector directing the expression of a peptide having B7-2-like activity alone, or in conjunction with a peptide having B7-1-like activity and/or B7-3-like activity. The transfected tumor cells are returned to the patient to result in expression
15 of the peptides on the surface of the transfected cell. Alternatively, gene therapy techniques can be used to target a tumor cell for transfection *in vivo*.

The presence of the peptide of the present invention having the activity of a B lymphocyte antigen(s) on the surface of the tumor cell provides the necessary costimulation signal to T cells to induce a T cell mediated immune response against the transfected tumor cells.
20 In addition, tumor cells which lack MHC class I or MHC class II molecules, or which fail to reexpress sufficient amounts of MHC class I or MHC class II molecules, can be transfected with nucleic acid encoding all or a portion of (e.g., a cytoplasmic-domain truncated portion) of an MHC class I α chain protein and β_2 microglobulin protein or an MHC class II α chain protein and an MHC class II β chain protein to thereby express MHC class I or MHC class II proteins on
25 the cell surface. Expression of the appropriate class I or class II MHC in conjunction with a peptide having the activity of a B lymphocyte antigen (e.g., B7-1, B7-2, B7-3) induces a T cell mediated immune response against the transfected tumor cell. Optionally, a gene encoding an antisense construct which blocks expression of an MHC class II associated protein, such as the invariant chain, can also be cotransfected with a DNA encoding a peptide having the activity of a
30 B lymphocyte antigen to promote presentation of tumor associated antigens and induce tumor

specific immunity. Thus, the induction of a T cell mediated immune response in a human subject may be sufficient to overcome tumor-specific tolerance in the subject.

The activity of a protein of the invention may, among other means, be measured by the following methods: Suitable assays for thymocyte or splenocyte cytotoxicity include, without
5 limitation, those described In: CURRENT PROTOCOLS IN IMMUNOLOGY. Coligan *et al.*, eds. Greene Publishing Associates and Wiley-Interscience (Chapter 3, Chapter 7); Herrmann *et al.*, *Proc Natl Acad Sci USA* 78:2488-2492, 1981; Herrmann *et al.*, *J Immunol* 128:1968-1974, 1982; Handa *et al.*, *J Immunol* 135:1564-1572, 1985; Takai *et al.*, *J Immunol* 137:3494-3500, 1986; Takai *et al.*, *J Immunol* 140:508-512, 1988; Herrmann *et al.*, *Proc Natl Acad Sci USA* 78:2488-2492, 1981;
10 Herrmann *et al.*, *J Immunol* 128:1968-1974, 1982; Handa *et al.*, *J Immunol* 135:1564-1572, 1985; Takai *et al.*, *J Immunol* 137:3494-3500, 1986; Bowman *et al.*, *J Virology* 61:1992-1998; Takai *et al.*, *J Immunol* 140:508-512, 1988; Bertagnolli *et al.*, *Cell Immunol* 133:327-341, 1991; Brown *et al.*, *J Immunol* 153:3079-3092, 1994.

Assays for T-cell-dependent immunoglobulin responses and isotype switching (which
15 will identify, among others, proteins that modulate T-cell dependent antibody responses and that affect Th1/Th2 profiles) include, without limitation, those described in: Maliszewski, *J Immunol* 144:3028-3033, 1990; and Mond and Brunswick In: CURRENT PROTOCOLS IN IMMUNOLOGY. Coligan *et al.*, (eds.) Vol 1 pp. 3.8.1-3.8.16, John Wiley and Sons, Toronto 1994.

Mixed lymphocyte reaction (MLR) assays (which will identify, among others, proteins
20 that generate predominantly Th1 and CTL responses) include, without limitation, those described In: CURRENT PROTOCOLS IN IMMUNOLOGY. Coligan *et al.*, eds. Greene Publishing Associates and Wiley-Interscience (Chapter 3, Chapter 7); Takai *et al.*, *J Immunol* 137:3494-3500, 1986; Takai *et al.*, *J Immunol* 140:508-512, 1988; Bertagnolli *et al.*, *J Immunol* 149:3778-3783, 1992.

Dendritic cell-dependent assays (which will identify, among others, proteins expressed by
25 dendritic cells that activate naive T-cells) include, without limitation, those described in: Guery *et al.*, *J Immunol* 134:536-544, 1995; Inaba *et al.*, *J Exp Med* 173:549-559, 1991; Macatonia *et al.*, *J Immunol* 154:5071-5079, 1995; Porgador *et al.*, *J Exp Med* 182:255-260, 1995; Nair *et al.*, *J Virol* 67:4062-4069, 1993; Huang *et al.*, *Science* 264:961-965, 1994; Macatonia *et al.*, *J Exp Med* 169:1255-1264, 1989; Bhardwaj *et al.*, *J Clin Investig* 94:797-807, 1994; and Inaba *et al.*, *J Exp Med* 172:631-640, 1990.
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Assays for lymphocyte survival/apoptosis (which will identify, among others, proteins that prevent apoptosis after superantigen induction and proteins that regulate lymphocyte homeostasis) include, without limitation, those described in: Darzynkiewicz *et al.*, *Cytometry* 13:795-808, 1992; Gorczyca *et al.*, *Leukemia* 7:659-670, 1993; Gorczyca *et al.*, *Cancer Res* 53:1945-1951, 1993; Itoh *et al.*, *Cell* 66:233-243, 1991; Zacharchuk, *J Immunol* 145:4037-4045, 1990; Zamai *et al.*, *Cytometry* 14:891-897, 1993; Gorczyca *et al.*, *Internat J Oncol* 1:639-648, 1992.

Assays for proteins that influence early steps of T-cell commitment and development include, without limitation, those described in: Antica *et al.*, *Blood* 84:111-117, 1994; Fine *et al.*, *Cell Immunol* 155: 111-122, 1994; Galy *et al.*, *Blood* 85:2770-2778, 1995; Toki *et al.*, *Proc Nat Acad Sci USA* 88:7548-7551, 1991.

Hematopoiesis Regulating Activity

A GENX protein of the present invention may be useful in regulation of hematopoiesis and, consequently, in the treatment of myeloid or lymphoid cell deficiencies. Even marginal biological activity in support of colony forming cells or of factor-dependent cell lines indicates involvement in regulating hematopoiesis, *e.g.* in supporting the growth and proliferation of erythroid progenitor cells alone or in combination with other cytokines, thereby indicating utility, for example, in treating various anemias or for use in conjunction with irradiation/chemotherapy to stimulate the production of erythroid precursors and/or erythroid cells; in supporting the growth and proliferation of myeloid cells such as granulocytes and monocytes/macrophages (*i.e.*, traditional CSF activity) useful, for example, in conjunction with chemotherapy to prevent or treat consequent myelo-suppression; in supporting the growth and proliferation of megakaryocytes and consequently of platelets thereby allowing prevention or treatment of various platelet disorders such as thrombocytopenia, and generally for use in place of or complimentary to platelet transfusions; and/or in supporting the growth and proliferation of hematopoietic stem cells which are capable of maturing to any and all of the above-mentioned hematopoietic cells and therefore find therapeutic utility in various stem cell disorders (such as those usually treated with transplantation, including, without limitation, aplastic anemia and paroxysmal nocturnal hemoglobinuria), as well as in repopulating the stem cell compartment post irradiation/chemotherapy, either in-vivo or ex-vivo (*i.e.*, in conjunction with bone marrow

transplantation or with peripheral progenitor cell transplantation (homologous or heterologous)) as normal cells or genetically manipulated for gene therapy.

The activity of a protein of the invention may, among other means, be measured by the following methods:

5 Suitable assays for proliferation and differentiation of various hematopoietic lines are cited above.

Assays for embryonic stem cell differentiation (which will identify, among others, proteins that influence embryonic differentiation hematopoiesis) include, without limitation, those described in: Johansson *et al.* *Cellular Biology* 15:141-151, 1995; Keller *et al.*, *Mol. Cell Biol.* 13:473-486, 1993; McClanahan *et al.*, *Blood* 81:2903-2915, 1993.

Assays for stem cell survival and differentiation (which will identify, among others, proteins that regulate lympho-hematopoiesis) include, without limitation, those described in: Methylcellulose colony forming assays, Freshney, In: CULTURE OF HEMATOPOIETIC CELLS. Freshney, *et al.* (eds.) Vol pp. 265-268, Wiley-Liss, Inc., New York, N.Y. 1994; Hirayama *et al.*, *Proc Natl Acad Sci USA* 89:5907-5911, 1992; McNiece and Briddeli, In: CULTURE OF HEMATOPOIETIC CELLS. Freshney, *et al.* (eds.) Vol pp. 23-39, Wiley-Liss, Inc., New York, N.Y. 1994; Neben *et al.*, *Exp Hematol* 22:353-359, 1994; Ploemacher, In: CULTURE OF HEMATOPOIETIC CELLS. Freshney, *et al.* eds. Vol pp. 1-21, Wiley-Liss, Inc., New York, N.Y. 1994; Spoonceret *et al.*, In: CULTURE OF HEMATOPOIETIC CELLS. Freshney, *et al.*, (eds.) Vol pp. 163-179, Wiley-Liss, Inc., New York, N.Y. 1994; Sutherland, In: CULTURE OF HEMATOPOIETIC CELLS. Freshney, *et al.*, (eds.) Vol pp. 139-162, Wiley-Liss, Inc., New York, N.Y. 1994.

Tissue Growth Activity

A GENX protein of the present invention also may have utility in compositions used for bone, cartilage, tendon, ligament and/or nerve tissue growth or regeneration, as well as for wound healing and tissue repair and replacement, and in the treatment of burns, incisions and ulcers.

A protein of the present invention, which induces cartilage and/or bone growth in circumstances where bone is not normally formed, has application in the healing of bone fractures and cartilage damage or defects in humans and other animals. Such a preparation employing a protein of the invention may have prophylactic use in closed as well as open fracture reduction and also in the improved fixation of artificial joints. De novo bone formation

induced by an osteogenic agent contributes to the repair of congenital, trauma induced, or oncologic resection induced craniofacial defects, and also is useful in cosmetic plastic surgery.

A protein of this invention may also be used in the treatment of periodontal disease, and in other tooth repair processes. Such agents may provide an environment to attract bone-forming cells, stimulate growth of bone-forming cells or induce differentiation of progenitors of bone-forming cells. A protein of the invention may also be useful in the treatment of osteoporosis or osteoarthritis, such as through stimulation of bone and/or cartilage repair or by blocking inflammation or processes of tissue destruction (collagenase activity, osteoclast activity, etc.) mediated by inflammatory processes.

Another category of tissue regeneration activity that may be attributable to the protein of the present invention is tendon/ligament formation. A protein of the present invention, which induces tendon/ligament-like tissue or other tissue formation in circumstances where such tissue is not normally formed, has application in the healing of tendon or ligament tears, deformities and other tendon or ligament defects in humans and other animals. Such a preparation employing a tendon/ligament-like tissue inducing protein may have prophylactic use in preventing damage to tendon or ligament tissue, as well as use in the improved fixation of tendon or ligament to bone or other tissues, and in repairing defects to tendon or ligament tissue. De novo tendon/ligament-like tissue formation induced by a composition of the present invention contributes to the repair of congenital, trauma induced, or other tendon or ligament defects of other origin, and is also useful in cosmetic plastic surgery for attachment or repair of tendons or ligaments. The compositions of the present invention may provide an environment to attract tendon- or ligament-forming cells, stimulate growth of tendon- or ligament-forming cells, induce differentiation of progenitors of tendon- or ligament-forming cells, or induce growth of tendon/ligament cells or progenitors *ex vivo* for return *in vivo* to effect tissue repair. The compositions of the invention may also be useful in the treatment of tendonitis, carpal tunnel syndrome and other tendon or ligament defects. The compositions may also include an appropriate matrix and/or sequestering agent as a carrier as is well known in the art.

The protein of the present invention may also be useful for proliferation of neural cells and for regeneration of nerve and brain tissue, *i.e.* for the treatment of central and peripheral nervous system diseases and neuropathies, as well as mechanical and traumatic disorders, which involve degeneration, death or trauma to neural cells or nerve tissue. More specifically, a protein

may be used in the treatment of diseases of the peripheral nervous system, such as peripheral nerve injuries, peripheral neuropathy and localized neuropathies, and central nervous system diseases, such as Alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic lateral sclerosis, and Shy-Drager syndrome. Further conditions which may be treated in accordance with the present invention include mechanical and traumatic disorders, such as spinal cord disorders, head trauma and cerebrovascular diseases such as stroke. Peripheral neuropathies resulting from chemotherapy or other medical therapies may also be treatable using a protein of the invention.

Proteins of the invention may also be useful to promote better or faster closure of non-healing wounds, including without limitation pressure ulcers, ulcers associated with vascular insufficiency, surgical and traumatic wounds, and the like.

It is expected that a protein of the present invention may also exhibit activity for generation or regeneration of other tissues, such as organs (including, for example, pancreas, liver, intestine, kidney, skin, endothelium), muscle (smooth, skeletal or cardiac) and vascular (including vascular endothelium) tissue, or for promoting the growth of cells comprising such tissues. Part of the desired effects may be by inhibition or modulation of fibrotic scarring to allow normal tissue to regenerate. A protein of the invention may also exhibit angiogenic activity.

A protein of the present invention may also be useful for gut protection or regeneration and treatment of lung or liver fibrosis, reperfusion injury in various tissues, and conditions resulting from systemic cytokine damage.

A protein of the present invention may also be useful for promoting or inhibiting differentiation of tissues described above from precursor tissues or cells; or for inhibiting the growth of tissues described above.

The activity of a protein of the invention may, among other means, be measured by the following methods:

Assays for tissue generation activity include, without limitation, those described in: International Patent Publication No. WO95/16035 (bone, cartilage, tendon); International Patent Publication No. WO95/05846 (nerve, neuronal); International Patent Publication No. WO91/07491 (skin, endothelium).

Assays for wound healing activity include, without limitation, those described in: Winter, EPIDERMAL WOUND HEALING, pp. 71-112 (Maibach and Rovee, eds.), Year Book Medical

Publishers, Inc., Chicago, as modified by Eaglstein and Menz, *J. Invest. Dermatol* 71:382-84 (1978).

Activin/Inhibin Activity

5 A GENX protein of the present invention may also exhibit activin- or inhibin-related activities. Inhibins are characterized by their ability to inhibit the release of follicle stimulating hormone (FSH), while activins are characterized by their ability to stimulate the release of follicle stimulating hormone (FSH). Thus, a protein of the present invention, alone or in heterodimers with a member of the inhibin family, may be useful as a contraceptive based on the ability of inhibins to decrease fertility in female mammals and decrease spermatogenesis in male mammals. Administration of sufficient amounts of other inhibins can induce infertility in these mammals. Alternatively, the protein of the invention, as a homodimer or as a heterodimer with other protein subunits of the inhibin-b group, may be useful as a fertility inducing therapeutic, based upon the ability of activin molecules in stimulating FSH release from cells of the anterior pituitary. See, for example, U.S. Pat. No. 4,798,885. A protein of the invention may also be useful for advancement of the onset of fertility in sexually immature mammals, so as to increase the lifetime reproductive performance of domestic animals such as cows, sheep and pigs.

The activity of a protein of the invention may, among other means, be measured by the following methods:

20 Assays for activin/inhibin activity include, without limitation, those described in: Vale *et al.*, *Endocrinology* 91:562-572, 1972; Ling *et al.*, *Nature* 321:779-782, 1986; Vale *et al.*, *Nature* 321:776-779, 1986; Mason *et al.*, *Nature* 318:659-663, 1985; Forage *et al.*, *Proc Natl Acad Sci USA* 83:3091-3095, 1986.

Chemotactic/Chemokinetic Activity

25 A protein of the present invention may have chemotactic or chemokinetic activity (*e.g.*, act as a chemokine) for mammalian cells, including, for example, monocytes, fibroblasts, neutrophils, T-cells, mast cells, eosinophils, epithelial and/or endothelial cells. Chemotactic and chemokinetic proteins can be used to mobilize or attract a desired cell population to a desired site of action. Chemotactic or chemokinetic proteins provide particular advantages in treatment of wounds and other trauma to tissues, as well as in treatment of localized infections. For example,

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attraction of lymphocytes, monocytes or neutrophils to tumors or sites of infection may result in improved immune responses against the tumor or infecting agent.

A protein or peptide has chemotactic activity for a particular cell population if it can stimulate, directly or indirectly, the directed orientation or movement of such cell population. Preferably, the protein or peptide has the ability to directly stimulate directed movement of cells. Whether a particular protein has chemotactic activity for a population of cells can be readily determined by employing such protein or peptide in any known assay for cell chemotaxis.

The activity of a protein of the invention may, among other means, be measured by following methods:

Assays for chemotactic activity (which will identify proteins that induce or prevent chemotaxis) consist of assays that measure the ability of a protein to induce the migration of cells across a membrane as well as the ability of a protein to induce the adhesion of one cell population to another cell population. Suitable assays for movement and adhesion include, without limitation, those described in: CURRENT PROTOCOLS IN IMMUNOLOGY, Coligan *et al.*, eds. (Chapter 6.12, MEASUREMENT OF ALPHA AND BETA CHEMOKINES 6.12.1-6.12.28); Taub *et al. J Clin Invest* 95:1370-1376, 1995; Lind *et al. APMIS* 103:140-146, 1995; Muller *et al., Eur J Immunol* 25: 1744-1748; Gruberet *et al. J Immunol* 152:5860-5867, 1994; Johnston *et al., J Immunol* 153: 1762-1768, 1994.

Hemostatic and Thrombolytic Activity

A protein of the invention may also exhibit hemostatic or thrombolytic activity. As a result, such a protein is expected to be useful in treatment of various coagulation disorders (including hereditary disorders, such as hemophilias) or to enhance coagulation and other hemostatic events in treating wounds resulting from trauma, surgery or other causes. A protein of the invention may also be useful for dissolving or inhibiting formation of thromboses and for treatment and prevention of conditions resulting therefrom (such as, for example, infarction of cardiac and central nervous system vessels (*e.g.*, stroke).

The activity of a protein of the invention may, among other means, be measured by the following methods:

Assay for hemostatic and thrombolytic activity include, without limitation, those described in: Linet *et al., J. Clin. Pharmacol.* 26:131-140, 1986; Burdick *et al., Thrombosis Res.*

45:413-419, 1987; Humphrey *et al.*, *Fibrinolysis* 5:71-79 (1991); Schaub, *Prostaglandins* 35:467-474, 1988.

Receptor/Ligand Activity

A protein of the present invention may also demonstrate activity as receptors, receptor
5 ligands or inhibitors or agonists of receptor/ligand interactions. Examples of such receptors and
ligands include, without limitation, cytokine receptors and their ligands, receptor kinases and
their ligands, receptor phosphatases and their ligands, receptors involved in cell—cell
interactions and their ligands (including without limitation, cellular adhesion molecules (such as
selectins, integrins and their ligands) and receptor/ligand pairs involved in antigen presentation,
10 antigen recognition and development of cellular and humoral immune responses). Receptors and
ligands are also useful for screening of potential peptide or small molecule inhibitors of the
relevant receptor/ligand interaction. A protein of the present invention (including, without
limitation, fragments of receptors and ligands) may themselves be useful as inhibitors of
receptor/ligand interactions.

15 The activity of a protein of the invention may, among other means, be measured by the
following methods:

Suitable assays for receptor-ligand activity include without limitation those described in:
CURRENT PROTOCOLS IN IMMUNOLOGY, Ed by Coligan, *et al.*, Greene Publishing Associates and
Wiley-Interscience (Chapter 7.28, Measurement of Cellular Adhesion under static conditions
20 7.28.1-7.28.22), Takai *et al.*, *Proc Natl Acad Sci USA* 84:6864-6868, 1987; Bierer *et al.*, *J. Exp.*
Med. 168:1145-1156, 1988; Rosenstein *et al.*, *J. Exp. Med.* 169:149-160 1989; Stoltenborg *et al.*,
J Immunol Methods 175:59-68, 1994; Stitt *et al.*, *Cell* 80:661-670, 1995.

Anti-Inflammatory Activity

Proteins of the present invention may also exhibit anti-inflammatory activity. The
25 anti-inflammatory activity may be achieved by providing a stimulus to cells involved in the
inflammatory response, by inhibiting or promoting cell—cell interactions (such as, for example,
cell adhesion), by inhibiting or promoting chemotaxis of cells involved in the inflammatory
process, inhibiting or promoting cell extravasation, or by stimulating or suppressing production
of other factors which more directly inhibit or promote an inflammatory response. Proteins
30 exhibiting such activities can be used to treat inflammatory conditions including chronic or acute

conditions), including without limitation inflammation associated with infection (such as septic shock, sepsis or systemic inflammatory response syndrome (SIRS)), ischemia-reperfusion injury, endotoxin lethality, arthritis, complement-mediated hyperacute rejection, nephritis, cytokine or chemokine-induced lung injury, inflammatory bowel disease, Crohn's disease or resulting from
5 over production of cytokines such as TNF or IL-1. Proteins of the invention may also be useful to treat anaphylaxis and hypersensitivity to an antigenic substance or material.

Tumor Inhibition Activity

In addition to the activities described above for immunological treatment or prevention of tumors, a protein of the invention may exhibit other anti-tumor activities. A protein may inhibit
10 tumor growth directly or indirectly (such as, for example, via ADCC). A protein may exhibit its tumor inhibitory activity by acting on tumor tissue or tumor precursor tissue, by inhibiting formation of tissues necessary to support tumor growth (such as, for example, by inhibiting angiogenesis), by causing production of other factors, agents or cell types which inhibit tumor growth, or by suppressing, eliminating or inhibiting factors, agents or cell types which promote
15 tumor growth.

Other Activities

A protein of the invention may also exhibit one or more of the following additional activities or effects: inhibiting the growth, infection or function of, or killing, infectious agents, including, without limitation, bacteria, viruses, fungi and other parasites; effecting (suppressing
20 or enhancing) bodily characteristics, including, without limitation, height, weight, hair color, eye color, skin, fat to lean ratio or other tissue pigmentation, or organ or body part size or shape (such as, for example, breast augmentation or diminution, change in bone form or shape); effecting biorhythms or circadian cycles or rhythms; effecting the fertility of male or female subjects; effecting the metabolism, catabolism, anabolism, processing, utilization, storage or
25 elimination of dietary fat, lipid, protein, carbohydrate, vitamins, minerals, cofactors or other nutritional factors or component(s); effecting behavioral characteristics, including, without limitation, appetite, libido, stress, cognition (including cognitive disorders), depression (including depressive disorders) and violent behaviors; providing analgesic effects or other pain reducing effects; promoting differentiation and growth of embryonic stem cells in lineages other
30 than hematopoietic lineages; hormonal or endocrine activity; in the case of enzymes, correcting

deficiencies of the enzyme and treating deficiency-related diseases; treatment of hyperproliferative disorders (such as, for example, psoriasis); immunoglobulin-like activity (such as, for example, the ability to bind antigens or complement); and the ability to act as an antigen in a vaccine composition to raise an immune response against such protein or another material or entity which is cross-reactive with such protein.

Neural disorders in general include Parkinson's disease, Alzheimer's disease, Huntington's disease, multiple sclerosis, amyotrophic lateral sclerosis (ALS), peripheral neuropathy, tumors of the nervous system, exposure to neurotoxins, acute brain injury, peripheral nerve trauma or injury, and other neuropathies, epilepsy, and/or tremors.

EQUIVALENTS

From the foregoing detailed description of the specific embodiments of the invention, it should be apparent that particular novel compositions and methods involving nucleic acids, polypeptides, antibodies, detection and treatment have been described. Although these particular embodiments have been disclosed herein in detail, this has been done by way of example for purposes of illustration only, and is not intended to be limiting with respect to the scope of the appended claims that follow. In particular, it is contemplated by the inventors that various substitutions, alterations, and modifications may be made as a matter of routine for a person of ordinary skill in the art to the invention without departing from the spirit and scope of the invention as defined by the claims. Indeed, various modifications of the invention in addition to those described herein will become apparent to those skilled in the art from the foregoing description and accompanying figures. Such modifications are intended to fall within the scope of the appended claims.

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Table 1

ORF#	Internal Identification Number	Protein similarity	Protein domain	Protein Classification	Cells or Tissues in which Gene is Expressed
1	13076366 (1, 2)	Novel Protein sim. GBank gj14691395 emb CAB41562.1 - (AL049727) putative large secreted protein [Streptomyces coelicolor]		UNCLASSIFIED	264636
2	80248091 (3, 4)	Novel Protein sim. GBank gj12829508 sp P71559 SUCC_MYCTU - SUCCINYL-COA SYNTHETASE BETA CHAIN (SCS-BETA)	Contains protein domain (PF00549) - CoA-ligases	UNCLASSIFIED	264907, 264600, 264602, 264762, 264769, 264689, 264638, 264567
3	80415924 (5, 6)			UNCLASSIFIED	264910, 264604, 264634, 264905, 264636, 264691, 264907, 264692, 264629
4	82018837 (7, 8)			UNCLASSIFIED	264908, 264909, 264760, 264628, 264635
5	79970035 (9, 10)			UNCLASSIFIED	22279002, 264563
6	79842462 (11, 12)		Contains protein domain (PF00127) - Copper binding proteins, plastocyanin/azurin family	UNCLASSIFIED	264908
7	85515576 (13, 14)	Novel Protein sim. GBank gj14415926 gb AAD20157 - (AC006282) unknown protein [Arabidopsis thaliana]		UNCLASSIFIED	20281099, 35696052, 264508, 264509, 264905, 264906, 264907, 264908, 264909, 264511, 265006, 264512, 265009, 264910, 264595, 264596, 264758, 264603, 264604, 264760, 264762, 264683, 264766, 264767, 264689, 35695917, 264690, 264692, 264693, 33657109, 264628, 264629, 35698423, 55811576, 35695855, 264630, 264631, 264632, 264634, 264636, 264637, 264638, 264639, 18108385, 264563, 264564, 264566, 264486
8	56924278 (15, 16)	Novel Protein sim. GBank gj1585562 sp Q06459 NIRB_KLEPN - NITRITE REDUCTASE (NAD(P)H) LARGE SUBUNIT		reductase	264907
9	79394457 (17, 18)			UNCLASSIFIED	265007, 265019, 263972
10	79556459 (19, 20)			UNCLASSIFIED	264906
11	20414027 (21, 22)				264605
12	94141210 (23, 24)	Novel Protein sim. GBank gj13678145 emb CAA98871 - (Z75543) similar to potassium channel protein [Caenorhabditis elegans]		misc_channel	264259, 265007, 83373044
13	20750551 (25, 26)			UNCLASSIFIED	264556, 264557, 264564
14	95105114 (27, 28)	Novel Protein sim. GBank gj12832781 emb CAA12845 - (AJ225805) inward potassium channel alpha subunit [Egeria densa]	Contains protein domain (PF00023) - Ank repeat	UNCLASSIFIED - potassium_channel	35896286, 35896052, 264510, 35695917, 264691, 264628, 35696423, 264555, 264558, 264559, 83373044
15	20456307 (29, 30)	Novel Protein sim. GBank gj1710781 sp Q10234 RT05_SCHPO - PROBABLE MITOCHONDRIAL 40S RIBOSOMAL PROTEIN S5	Contains protein domain (PF00333) - Ribosomal protein S5	ribosomalprot	264604
16	20760356 (31, 32)				284555

17	20292744 (33, 34)	Novel Protein sim. GBank gij1174884[sp]P44391[U]RE1_HAEN - UREASE ALPHA SUBUNIT (UREA AMIDOHYDROLASE)	Contains protein domain (PF00449) - Urease	264600	
18	80246804 (35, 36)	Novel Protein sim. GBank gij2281102 (AC002333) - SF16 Isolog [Arabidopsis thaliana]		29331827, 264555, 264557, 264638, 264558	
19	80076624 (37, 38)	Novel Protein sim. GBank gij2508112[sp]P43672[U]UP_ECOLI - ABC TRANSPORTER ATP-BINDING PROTEIN UUP	UNCLASSIFIED transport	22278998, 264907, 264910, 264600, 264693	
20	20724558 (39, 40)	Novel Protein sim. GBank gij1730203[sp]P50442[GATM_RAT - GLYCINE AMIDINOTRANSFERASE PRECURSOR (L- ARGININE:GLYCINE AMIDINOTRANSFERASE) (TRANSAMIDINASE) (AT)	UNCLASSIFIED	22278995, 264906, 265008, 265010, 265011, 264602, 264605, 264766, 264688, 21906784, 264891, 18108376, 264638, 18108387, 264486	
21	80417554 (41, 42)	Novel Protein sim. GBank gij1730203[sp]P50442[GATM_RAT - GLYCINE AMIDINOTRANSFERASE PRECURSOR (L- ARGININE:GLYCINE AMIDINOTRANSFERASE) (TRANSAMIDINASE) (AT)	UNCLASSIFIED	22278995, 264906, 265008, 265010, 265011, 264602, 264605, 264766, 264688, 21906784, 264891, 18108376, 264638, 18108387, 264486	
22	11705858 (43, 44)	Novel Protein sim. GBank gij1877329[emb]CAB07077] - (Z82771) fadE25 [Mycobacterium tuberculosis]	Contains protein domain (PF00441) - Acyl-CoA dehydrogenase	264685 264488, 264907, 264909, 264600, 264602, 264603, 264605, 264682, 264766, 32833986, 264636, 264486	
23	80419176 (45, 46)	Novel Protein sim. GBank gij1877329[emb]CAB07077] - (Z82771) fadE25 [Mycobacterium tuberculosis]	Contains protein domain (PF00441) - Acyl-CoA dehydrogenase	264685 264488, 264907, 264909, 264600, 264602, 264603, 264605, 264682, 264766, 32833986, 264636, 264486	
24	20291697 (47, 48)	Novel Protein sim. GBank gij1877329[emb]CAB07077] - (Z82771) fadE25 [Mycobacterium tuberculosis]	Contains protein domain (PF00441) - Acyl-CoA dehydrogenase	264685 264488, 264907, 264909, 264600, 264602, 264603, 264605, 264682, 264766, 32833986, 264636, 264486	
25	80253774 (49, 50)	Novel Protein sim. GBank gij1877329[emb]CAB07077] - (Z82771) fadE25 [Mycobacterium tuberculosis]	Contains protein domain (PF00441) - Acyl-CoA dehydrogenase	264685 264488, 264907, 264909, 264600, 264602, 264603, 264605, 264682, 264766, 32833986, 264636, 264486	
26	80255394 (51, 52)	Novel Protein sim. GBank gij1877329[emb]CAB07077] - (Z82771) fadE25 [Mycobacterium tuberculosis]	Contains protein domain (PF00441) - Acyl-CoA dehydrogenase	264685 264488, 264907, 264909, 264600, 264602, 264603, 264605, 264682, 264766, 32833986, 264636, 264486	
27	80235795 (53, 54)	Novel Protein sim. GBank gij1877329[emb]CAB07077] - (Z82771) fadE25 [Mycobacterium tuberculosis]	Contains protein domain (PF00441) - Acyl-CoA dehydrogenase	264685 264488, 264907, 264909, 264600, 264602, 264603, 264605, 264682, 264766, 32833986, 264636, 264486	
28	78483581 (55, 56)	Novel Protein sim. GBank gij122290[sp]O08333[K6PF_STRCO - 6- PHOSPHOFRUCTOKINASE (PHOSPHOFRUCTOKINASE) (PHOSPHOHEXOKINASE) (ATP-PFK)	UNCLASSIFIED kinase	264638 264601, 264762, 264766, 264769, 264636	
29	82448765 (57, 58)	Novel Protein sim. GBank gij122290[sp]O08333[K6PF_STRCO - 6- PHOSPHOFRUCTOKINASE (PHOSPHOFRUCTOKINASE) (PHOSPHOHEXOKINASE) (ATP-PFK)	UNCLASSIFIED kinase	264638 264601, 264762, 264766, 264769, 264636	
30	79198333 (59, 60)	Novel Protein sim. GBank gij122290[sp]O08333[K6PF_STRCO - 6- PHOSPHOFRUCTOKINASE (PHOSPHOFRUCTOKINASE) (PHOSPHOHEXOKINASE) (ATP-PFK)	UNCLASSIFIED kinase	264638 264601, 264762, 264766, 264769, 264636	
31	19848158 (61, 62)	Novel Protein sim. GBank gij3560504 (AF027770) - unknown [Mycobacterium smegmatis]	UNCLASSIFIED	264908, 265019, 264687, 21906764, 21906766	
32	82449485 (63, 64)	Novel Protein sim. GBank gij3560504 (AF027770) - unknown [Mycobacterium smegmatis]	UNCLASSIFIED	264908, 265019, 264687, 21906764, 21906766	
33	79582628 (65, 66)	Novel Protein sim. GBank gij2129003[pir]G64507 - hypothetical protein MJ1665 - Methanococcus jannaschii	UNCLASSIFIED	264908, 265019, 264687, 21906764, 21906766	
34	87467657 (67, 68)	Novel Protein sim. GBank gij5420387[emb]CAB46679.1] - (AJ243459) proteophosphoglycan [Leishmania major]	UNCLASSIFIED	264908, 265019, 264687, 21906764, 21906766	
35	95005170 (69, 70)	Novel Protein sim. GBank gij5420387[emb]CAB46679.1] - (AJ243459) proteophosphoglycan [Leishmania major]	UNCLASSIFIED	264908, 265019, 264687, 21906764, 21906766	
36	19642042 (71, 72)	Novel Protein sim. GBank gij3287739[sp]P73538[BIOB_SYN3 - BIOTIN SYNTHASE (BIOTIN SYNTHETASE)]	UNCLASSIFIED synthase	60432289, 264600, 264602, 264760, 18106357, 264769, 265020, 264691 264600, 264687, 264558, 264639	
37	20369215 (73, 74)	Novel Protein sim. GBank gij2313134[gb]AAD07126.1] - (AE000527) delta-1-pyrroline-5-carboxylate dehydrogenase [Helicobacter pylori 26695]	dehydrogenase	264603	

38	20466334 (75, 76)	Novel Protein sim. GBank gij3805970[embjCAA06231] - (AJ004933) periplasmic nitrate reductase, large subunit [Rhodospseudomonas sp.]			reductase	264605
39	94300715 (77, 78)	Novel Protein sim. GBank gij1929448 (L63543) - endodermin [Xenopus laevis]		Contains protein domain (PF00207) - Alpha-2-macroglobulin family	complement	264905, 264906, 264907, 66712502, 264908, 264909, 264511, 265009, 264910, 55812038, 264758, 265011, 264762, 264682, 264763, 264764, 264766, 265022, 264693, 264628, 264631, 264634, 264635, 264555, 264638, 18108381, 264558, 18108385, 264482
40	20635625 (79, 80)				UNCLASSIFIED	264592
41	80023287 (81, 82)	Novel Protein sim. GBank gij854065[embjCAA58337] - (X83413) U88 [Human herpesvirus 6]				264591, 35695917
42	20724566 (83, 84)				UNCLASSIFIED	264602
43	20467069 (85, 86)	Novel Protein sim. GBank gij3820584 (AF086781) - carbamoylphosphate synthetase large subunit [Zymomonas mobilis]			synthase	264605
44	13085287 (87, 88)	Novel Protein sim. GBank gij2494784[spjQ50729]GUA_MYCTU - GMP SYNTHASE (GLUTAMINE-HYDROLYZING) (GLUTAMINE AMIDOTRANSFERASE) (GMP SYNTHETASE)		Contains protein domain (PF00958) - GMP synthase C terminal domain	synthase	264769, 264636
45	39384711 (89, 90)	Novel Protein sim. GBank gij1981738 (U98688) - myosin-I binding protein Acan125 [Acanthamoeba castellanii]			UNCLASSIFIED	264769, 264510, 264508
46	95003398 (91, 92)				ngf	264566
47	11696624 (93, 94)				UNCLASSIFIED	264689
48	79407218 (95, 96)					18108385, 264635, 264828
49	21659844 (97, 98)				UNCLASSIFIED	264603
50	80503986 (99, 100)					264508, 264603, 264769, 264689, 264636, 264558, 264486
51	80255569 (101, 102)	Novel Protein sim. GBank gij3411177 (AF076240) - MocC [Rhizobium leguminosarum bv. viciae]			UNCLASSIFIED	264593, 18108387
52	78208528 (103, 104)	Novel Protein sim. GBank gij3914992[spjQ26264]SM41_HEMPU - 41 KD SPICULE MATRIX PROTEIN PRECURSOR (HSM41) (HPSMC)			struct	264634
53	36986970 (105, 106)	Novel Protein sim. GBank gij3980411 (AC004561) - putative proline-rich protein [Arabidopsis thaliana]			UNCLASSIFIED	264782
54	79570897 (107, 108)					
55	80202703 (109, 110)	Novel Protein sim. GBank gij1633572 (U52064) - Herpesvirus saimiri ORF73 homolog [Kaposi's sarcoma-associated herpes-like virus]			UNCLASSIFIED	264630, 264909, 264766
56	8758408 (111, 112)	Novel Protein sim. GBank gij4321580[gbjAAD15785] - (AF050114) alginate lyase [Pseudomonas sp. W7]				29331824, 264102, 265018, 18108376
57	11223386 (113, 114)			Contains protein domain (PF00076) - RNA recognition motif (a.k.a. RRM, RBD, or RNP domain)	UNCLASSIFIED	264604
						264557

58	91227508 (115, 116)	Novel Protein sim. GBank gil5616074 gb AAD45618.1 AF06194 - (AF06194) protease- derived STE20-like kinase PSK [Homo sapiens]	Contains protein domain (PF00069) - Eukaryotic protein kinase domain	kinase	56182575, 264259, 60432049, 35696052, 66712502, 264909, 265008, 265010, 265011, 264681, 29148784, 35695917, 60170615, 264691, 264692, 264693, 18108374, 35696423, 58182323, 60432113
59	80077371 (117, 118)	Novel Protein sim. GBank gil1172920 sp P45830 RFE_MYCLE - PUTATIVE UNDECAPRENYL-PHOSPHATE ALPHA-N- ACETYLGLUCOSAMINYLTRANSFERASE	Contains protein domain (PF00953) - Glycosyl transferase	transferase	264600, 264689, 264638
60	12958341 (119, 120)				
61	80426808 (121, 122)	Novel Protein sim. GBank gil1710218 (U79260) - unknown [Homo sapiens]		glycoprotein	264689 264766
62	13504968 (123, 124)				264630
63	16474553 (125, 126)			UNCLASSIFIED	265019
64	20724578 (127, 128)	Novel Protein sim. GBank gil420945 pir A47041 - transposase homolog (insertion element ISAE1) - Alcaligenes eutrophus		UNCLASSIFIED	264602
65	78326308 (129, 130)	Novel Protein sim. GBank gil3122312 sp O06134 KPYK_MYCTU - PYRUVATE KINASE (PK)	Contains protein domain (PF00224) - Pyruvate kinase	kinase	264563
66	46854384 (131, 132)	Novel Protein sim. GBank gil3928723 emb CAA22219 - (AL034355) putative ABC transporter [Streptomyces coelicolor]		transport	22278996, 264558
67	78952543 (133, 134)	Novel Protein sim. GBank gil231985 sp P30234 DHA_MYCTU - ALANINE DEHYDROGENASE (40 KD ANTIGEN)		dehydrogenase	265021
68	79817382 (135, 136)				264909
69	79841784 (137, 138)			UNCLASSIFIED	264908
70	79871329 (139, 140)				264906, 264908
71	65897456 (141, 142)			UNCLASSIFIED	264602, 265021
72	87734977 (143, 144)	Novel Protein sim. GBank gil4415928 gb AAD20157 - (AC006282) unknown protein [Arabidopsis thaliana]		UNCLASSIFIED	264488, 264905, 264906, 264907, 264908, 264511, 265008, 264910, 264758, 87188474, 264882, 264766, 264686, 264689, 35695917, 265021, 60170615, 264691, 33657023, 264692, 264693, 264629, 264631, 264639, 22279000
73	80025241 (145, 146)			UNCLASSIFIED	60424179, 264508, 264908, 265007, 264603, 264687, 264689, 264692, 18108387
74	20377410 (147, 148)			UNCLASSIFIED	264605
75	11819032 (149, 150)	Novel Protein sim. GBank gil2853098 emb CAA16914 - (AL021787) vacuolar protein sorting [Schizosaccharomyces pombe]		UNCLASSIFIED	264689
76	95105303 (151, 152)	Novel Protein sim. GBank gil4468811 emb CAB38212 - (AL035601) putative protein [Arabidopsis thaliana]		UNCLASSIFIED	83373044, 264906, 264557
77	10144718 (153, 154)	Novel Protein sim. GBank gil854065 emb CAA58337 - (X83413) U88 [Human herpesvirus 6]		UNCLASSIFIED	264563
78	8758258 (155, 156)			UNCLASSIFIED	264604

79	94140190 (157, 158)	Novel Protein sim. GBank gi 5689453 dbj BAA83010.1 - (AB028981) KIAA1058 protein [Homo sapiens]	Contains protein domain (PF00169) - PH domain		35636286, 22278998, 29331822, 29331824, 29331825, 29331827, 264905, 264906, 264907, 66712502, 264908, 264909, 265008, 265009, 264910, 60170831, 55812038, 33109954, 265017, 265018, 264288, 264788, 36181582, 21906785, 21906789, 29148784, 265020, 264690, 264691, 264692, 264693, 60431528, 35896423, 264631, 264632, 264634, 264836, 264639, 83373044, 264564, 264566, 264567
80	82314840 (159, 160)			UNCLASSIFIED	264769, 264601, 265008, 264910, 264604, 264605, 264634, 264635, 264805, 264762, 264637, 264592, 264628, 264907, 264691, 264908, 264567, 264909, 264766
81	20467247 (161, 162)	Novel Protein sim. GBank gi 1723442 sp Q10258 YD2A_SCHPO - HYPOTHETICAL 89.0 KD PROTEIN C56F8.10 IN CHROMOSOME I		reductase	264605
82	16331388 (163, 164)	Novel Protein sim. GBank gi 2895866 (AF045770) - methylmalonate semi-aldehyde dehydrogenase [Oryza sativa]		dehydrogenase	264567
83	94741180 (165, 166)	Novel Protein sim. GBank gi 3402673 (AC004697) - unknown protein [Arabidopsis thaliana]		UNCLASSIFIED	264488, 264508, 264509, 264905, 264908, 264909, 264511, 264591, 264593, 264594, 264595, 264596, 264758, 264603, 264760, 264681, 18108351, 264762, 264682, 264764, 264684, 264766, 264686, 264632, 264637, 264557, 264638, 264639, 18108385, 264556
84	80355375 (167, 168)	Novel Protein sim. GBank gi 1173364 sp P45380 SAT1_RAT - SULFATE ANION TRANSPORTER 1 (CANALICULAR SULFATE TRANSPORTER) (SULFATE/CARBONATE ANTIPORTER)		transport	264908, 264907, 264908, 264909, 264910, 264760, 264763, 264764, 264766, 264768, 264769, 35895855, 264638, 264637
85	80499600 (169, 170)	Novel Protein sim. GBank gi 2120998 pir S70682 - glycosyltransferase homolog - Bordetella pertussis		transferase	264605, 264762, 264687, 264769, 18108374, 264636, 264488
86	39559043 (171, 172)	Novel Protein sim. GBank gi 3256023 emb CAA17228.1 - (AL021897) hypothetical protein Rv1112 [Mycobacterium tuberculosis]			264910
87	13856808 (173, 174)			UNCLASSIFIED	264093

88	95344718 (175, 176)	Novel Protein sim. GBank gjl559703[dbj BAA07552] - (D38549) ha1025 is new [Homo sapiens]			52644507, 52646365, 18108398, 65274572, 56182575, 56994075, 35696286, 22278997, 22278998, 22278999, 264092, 264093, 264094, 264095, 264259, 29331822, 29331824, 56182181, 66714117, 29331825, 29331826, 60432289, 29331827, 29331828, 35696052, 33656970, 264105, 264508, 264905, 264906, 264907, 264908, 29331830, 66712502, 52644045, 56182435, 285007, 265009, 264910, 60170831, 264592, 60431735, 60433356, 33657402, 264757, 60433438, 55812038, 264758, 21906754, 52646317, 33109954, 52644298, 87168474, 265011, 87168559, 264601, 265017, 265018, 264604, 265019, 264448, 264369, 264288, 264766, 52644229, 21906786, 21906767, 21906768, 21906769, 55811957, 35695917, 265020, 265021, 265022, 60170815, 52644150, 33657023, 65274820, 33657109, 27486261, 27486264, 33657349, 35695763, 264628, 263972, 18108374, 55810764, 35696423, 55811576, 65274791, 35695855, 60431850, 264636, 52644332, 56182323, 60170394, 83373044, 18108385, 18108387, 18108388, 56526486, 87168518, 60432113, 22279000, 22279002, 264482, 264584, 264486, 264600
89	80077389 (177, 178)	Novel Protein sim. GBank gjl1710383[sp P46352 RIPX_BACSU - PROBABLE INTEGRASE/RECOMBINASE RIPX			
90	82115988 (178, 180)	Novel Protein sim. GBank gjl2499891[sp P76403 YEGO_ECOLI - PUTATIVE PROTEASE IN BAER-OGRK INTERGENIC REGION	UNCLASSIFIED	protease	264760 265006
92	79554871 (183, 184)	Novel Protein sim. GBank gjl3367754[emb CAA20079] - (AL031155) hypothetical protein SC3A7.16c [Streptomyces coelicolor]	UNCLASSIFIED		264691
93	80496778 (185, 186)	Novel Protein sim. GBank gjl2895095 (AF011337) - putative E1-E2 ATPase [Mus musculus]	ATPase_associated		264907, 264908, 264910, 265009, 264605, 264769
94	79646649 (187, 188)	Novel Protein sim. GBank gjl171919[sp P46920 OPUA_BACSU - GLYCINE BETAINES TRANSPORT ATP-BINDING PROTEIN OPUA	Contains protein domain (PF00571) - CBS domain	transport	264906
95	11050238 (189, 190)				264594

98	94322125 (191, 192)	Novel Protein sim. GBank gi 4589560 dbj BAA76802.1 - (AB023175) KIAA0958 protein [Homo sapiens]	UNCLASSIFIED	22278995, 22278999, 264259, 29331822, 29331826, 35896052, 29146499, 284509, 264905, 264907, 264908, 264909, 265007, 265008, 264910, 265009, 264593, 265010, 265017, 264604, 265019, 18108351, 264288, 264766, 264768, 264769, 21908765, 21908767, 21908769, 265020, 264692, 33657182, 35695763, 264628, 264629, 18108379, 284631, 264636, 18108381, 264559, 18108382, 83373044, 22278002, 284508
97	79605200 (193, 194)	Novel Protein sim. GBank gi 4583559 emb CAB40388.1 - (AJ005255) OxyR [Erwinia chrysanthemi]	UNCLASSIFIED	264909
98	79427000 (195, 196)	Novel Protein sim. GBank gi 1001693 dbj BAA10430 - (D64002) hypothetical protein [Synecocystis sp.]	UNCLASSIFIED	264605
99	20466524 (197, 198)	Novel Protein sim. GBank gi 1169479 sp P43929 EFG_HAEIN - ELONGATION FACTOR G (EF-G)	UNCLASSIFIED	264693
100	79640113 (199, 200)	Novel Protein sim. GBank gi 480897 pir S37485 - gene	UNCLASSIFIED	265020, 264102, 263972
101	80203298 (201, 202)	msg1 protein - mouse	UNCLASSIFIED	264605
102	20467259 (203, 204)	Novel Protein sim. GBank gi 2894166 emb CAA11773.1 - (AJ223998) PCZA361.18 [Amycolatopsis orientalis]	synthase	264605
103	20466368 (205, 206)	Novel Protein sim. GBank gi 1731040 sp P54509 YQHH_BACSU - HYPOTHETICAL HELICASE IN SINI-GCVT INTERGENIC REGION	Contains protein domain (PF00271) - helicase Helicases conserved C-terminal domain	264605
104	80247572 (207, 208)	Novel Protein sim. GBank gi 854065 emb CAA58337 - (X83413) U88 [Human herpesvirus 6]	UNCLASSIFIED	264591, 264595, 264602
105	79605208 (209, 210)	Novel Protein sim. GBank gi 1685117 U70770 - furrowed [Drosophila melanogaster]	complement	264508
106	28382059 (211, 212)	Novel Protein sim. GBank gi 1705505 sp P54729 BS4_MOUSE - BS4 PROTEIN	UNCLASSIFIED	264511, 265009
107	80057791 (213, 214)	Novel Protein sim. GBank gi 4887229 gb AAD32244.1 AF15075 - (AF150755) microtubule-actin crosslinking factor [Mus musculus]	ATPase-associated	29331824, 264591, 21908764, 265019
108	80237936 (215, 216)	Novel Protein sim. GBank gi 263577 emb CAB15264 - (Z99120) similar to ABC transporter (ATP-binding protein) [Bacillus subtilis]	transport	18108374, 35695917, 22278996, 264113, 284600, 264602, 264603, 265017, 264910, 264906, 264636, 264766
109	95194148 (217, 218)	Novel Protein sim. GBank gi 2330791 emb CAB11265 - (Z98601) carboxypeptidase s precursor [Schizosaccharomyces pombe]	UNCLASSIFIED	264758, 264603, 264630, 264636, 264637
110	79582823 (219, 220)			264687
111	39565458 (221, 222)			264564
112	79856038 (223, 224)		UNCLASSIFIED	264908
113	17959439 (225, 226)		UNCLASSIFIED	265007
114	80502101 (227, 228)		UNCLASSIFIED	264769

115	80251003 (228, 230)	Novel Protein sim. GBank gij2246532 (U93872) - ORF 73, contains large complex repeat CR 73 [Kaposi's sarcoma-associated herpesvirus]		UNCLASSIFIED	52645156, 52645080, 33656970, 264592, 21906754, 27486264, 18108379, 35696423, 264635, 52644332, 18108382
116	81288889 (231, 232)				264905, 264906, 264907, 264908, 264909, 264910, 264758, 265010, 264763, 264882, 264764, 264766, 264685, 264686, 264768, 264789, 33657023, 264693, 33657109, 264628, 18108374, 264631, 264632, 264634, 264636, 264637, 264638, 264639, 56526488, 264565, 264566
117	78636695 (233, 234)		Contains protein domain (PF00170) - bZIP transcription factor	UNCLASSIFIED	264639, 264693
118	80222170 (235, 236)				263874
119	91013071 (237, 238)	Novel Protein sim. GBank gij732526 (U22327) - alpha2(IV) collagen [Caenorhabditis elegans]		UNCLASSIFIED	22278996, 29331824, 60432289, 265007, 60433438, 264603, 264605, 18108351, 264769, 264689, 265020, 264534, 27486261, 264558, 83373044, 18108385, 264564
120	8756491 (239, 240)	Novel Protein sim. GBank gij2131219 [pir][S50157] - cyclin-dependent kinase chain SRB10 - yeast (Saccharomyces cerevisiae)		kinase	264603
121	80026153 (241, 242)				264595
122	20457620 (243, 244)	Novel Protein sim. GBank gij2052147 [emb][CAB08137] - (Z64752) ksgA [Mycobacterium tuberculosis]	Contains protein domain (PF00398) - Ribosomal RNA adenine dimethylases	transferase	264605
123	8758278 (245, 246)				264604
124	79104017 (247, 248)	Novel Protein sim. GBank gij283338 [sp]Q43134 [UGST_SORBI - GRANULE-BOUND GLYCOGEN (STARCH) SYNTHASE PRECURSOR		synthase	18108394, 18108397, 265006, 265007, 265008, 265010, 265011, 18108355, 18108379, 18108380, 18108384
125	87797986 (249, 250)	Novel Protein sim. GBank gij475542 (U08255) - glutamate receptor delta-1 subunit [Rattus norvegicus]	Contains protein domain (PF00060) - Ligand-gated ion channel	misc_channel	264508, 264906, 265009, 264596, 22279002
126	56701283 (251, 252)	Novel Protein sim. GBank gij510278 [emb][CAB45200.1] - (AL079308) putative transcriptional regulator [Streptomyces coelicolor]			264511
127	20467267 (253, 254)				264605
128	80248473 (255, 256)	Novel Protein sim. GBank gij130120 [sp]P23620 [PHOB_PSEAE - PHOSPHATE REGULON TRANSCRIPTIONAL REGULATORY PROTEIN PHOB	Contains protein domain (PF00072) - Response regulator receiver domain	UNCLASSIFIED - phosphatase	264907, 264908, 264910, 264600, 264601, 264603, 264605, 18108351, 264693, 264557
129	95280543 (257, 258)	Novel Protein sim. GBank gij250849 [sp]P38036 [YGC8_ECOLI - HYPOTHETICAL 100.5 KD PROTEIN IN IAP-CYSH INTERGENIC REGION	Contains protein domain (PF00270) - DEAD/DEAH box helicase	UNCLASSIFIED	35696423, 35695855, 264600, 264602, 264603, 264604, 264605, 264508, 264908, 264564, 264628, 264682, 264565, 264683
130	80085583 (259, 260)	Novel Protein sim. GBank gij854085 [emb][CAA58337] - (X83413) U88 [Human herpesvirus 6]			264634
131	94995022 (261, 262)	Novel Protein sim. GBank gij1076038 [pir][S54860 - ABC transporter PstC-2 chain - Mycobacterium tuberculosis]	Contains protein domain (PF00528) - Binding-protein-dependent transport systems inner membrane component	transport	18108376, 264769, 29331826, 264689, 22278996, 265021, 264600, 264511, 264601, 264602, 264605, 264905, 264638

132	10887692 (263, 264)	Novel Protein sim. GBank gl 1677340 emb CAB07068 - (Z92771) accA3 [Mycobacterium tuberculosis]	Contains protein domain (PF00289) - Carbamoyl-phosphate synthase (CPSase)	carboxylase	264636 264905, 264689
133	94630883 (265, 266)	Novel Protein sim. GBank gl 458583 emb CAB40932.1 - (AL049630) putative NADH dehydrogenase [Streptomyces coelicolor]		dehydrogenase	264905, 264605, 265021
134	78834660 (267, 268)	Novel Protein sim. GBank gl 1460074 emb CAB01049 - (Z77250) hypothetical protein Rv2566 [Mycobacterium tuberculosis]			264634
135	19885057 (269, 270)	Novel Protein sim. GBank gl 2125896 emb CAA73511 - (Y13070) folypolyglutamate synthase [Streptomyces coelicolor]		synthase	264508
136	79846083 (271, 272)	Novel Protein sim. GBank gl 5420387 emb CAB46678.1 - (AJ243459) proteophosphoglycan [Leishmania major]			264683, 264685, 264686, 264691, 264692, 264693
137	79819770 (273, 274)	Novel Protein sim. GBank gl 5889912 emb CAB52075.1 - (AL109732) putative mutase [Streptomyces coelicolor]		UNCLASSIFIED	18108374, 18108385, 33657109, 33657182, 265010, 22278998, 265006, 265007, 265008, 265009, 264693
138	78635971 (275, 276)	Novel Protein sim. GBank gl 3581916 emb CAA20855 - (AL031545) mutS family DNA mismatch repair protein [Schizosaccharomyces pombe]	Contains protein domain (PF01817) - Chorismate mutase	dehydrogenase	22278986, 265007, 264910, 60433356, 265010, 264602, 264605, 264768, 264688, 264769, 264693, 32833986, 18108374, 18108387
139	36588076 (277, 278)	Novel Protein sim. GBank gl 3581916 emb CAA20855 - (AL031545) mutS family DNA mismatch repair protein [Schizosaccharomyces pombe]		UNCLASSIFIED	264908
140	79825759 (279, 280)	Novel Protein sim. GBank gl 3581916 emb CAA20855 - (AL031545) mutS family DNA mismatch repair protein [Schizosaccharomyces pombe]		nuclease	264600 264602, 265017
141	20700084 (281, 282)	Novel Protein sim. GBank gl 3581916 emb CAA20855 - (AL031545) mutS family DNA mismatch repair protein [Schizosaccharomyces pombe]			264600
142	80028104 (283, 284)	Novel Protein sim. GBank gl 3581916 emb CAA20855 - (AL031545) mutS family DNA mismatch repair protein [Schizosaccharomyces pombe]		UNCLASSIFIED	263978, 264600, 264910, 264632, 264508, 264563, 264564, 264591, 264556, 264908, 264629, 264639
143	11072274 (285, 286)	Novel Protein sim. GBank gl 3581916 emb CAA20855 - (AL031545) mutS family DNA mismatch repair protein [Schizosaccharomyces pombe]			264600
144	95009102 (287, 288)	Novel Protein sim. GBank gl 3581916 emb CAA20855 - (AL031545) mutS family DNA mismatch repair protein [Schizosaccharomyces pombe]		UNCLASSIFIED	22278996, 264602
145	80027058 (289, 290)	Novel Protein sim. GBank gl 3581916 emb CAA20855 - (AL031545) mutS family DNA mismatch repair protein [Schizosaccharomyces pombe]			264600
146	13085662 (291, 292)	Novel Protein sim. GBank gl 3581916 emb CAA20855 - (AL031545) mutS family DNA mismatch repair protein [Schizosaccharomyces pombe]	Contains protein domain (PF01675) - Transposase		264687
147	94320368 (293, 294)	Novel Protein sim. GBank gl 3581916 emb CAA20855 - (AL031545) mutS family DNA mismatch repair protein [Schizosaccharomyces pombe]		helicase	264905, 264906, 264909, 264510, 265009, 60433356, 264600, 264601, 264604, 264605, 264687, 264769, 18108386, 65274791, 18108387
148	80248804 (295, 296)	Novel Protein sim. GBank gl 3581916 emb CAA20855 - (AL031545) mutS family DNA mismatch repair protein [Schizosaccharomyces pombe]		transport	265009, 265010, 264600, 264602, 264603, 264604, 264605, 264693, 33657109, 264636

149	80249373 (287, 298)	Novel Protein sim. GBank gij1723073[sp]Q11040[Y081_MYCTU - HYPOTHETICAL ABC TRANSPORTER ATP-BINDING PROTEIN CY50.01	Contains protein domain (PF00005) - transport ABC transporter	265010, 264600, 264601, 264603, 264604, 27486265, 264636
150	20294748 (299, 300)	Novel Protein sim. GBank gij3724125[emb]CAA11905[- (AJ224340)] maltosephosphorylase [Lactobacillus sanfrancisco]		264600
151	20726398 (301, 302)	Novel Protein sim. GBank gij1729312[sp]P07651[DEOB_ECOLI - PHOSPHOPENTOMUTASE (PHOSPHODEOXYRIBOMUTASE)]	Contains protein domain (PF01676) - Metalloenzyme superfamily	264602
152	95002877 (303, 304)	Novel Protein sim. GBank gij2497952[sp]P55667[Y4TM_RHISN - HYPOTHETICAL HYDROLASE/PEPTIDASE Y4TM	peptidase	264602
153	80256665 (305, 306)	Novel Protein sim. GBank gij3123021[sp]Q90508[VIT1_FUNHE - VITELLOGENIN I PRECURSOR (VTG I) (CONTAINS: LIPOVITELLIN 1 (LV1); PHOSVITIN (PV); LIPOVITELLIN 2 (LV2))	UNCLASSIFIED	264593
154	82305968 (307, 308)	Novel Protein sim. GBank gij419697[pir]JN0443 - transcription initiation factor sigma homolog hrdB - Streptomyces aureofaciens	Contains protein domain (PF00140) - Sigma-70 factor	264910, 264762, 264691, 264634
155	20429859 (308, 310)	Novel Protein sim. GBank gij628710[pir]S41739 - hypothetical protein - Escherichia coli	UNCLASSIFIED	264565
156	39564742 (311, 312)	Novel Protein sim. GBank gij3695013 (AF052586) - CitA [Pseudomonas aeruginosa]	Contains protein domain (PF00142) - 4Fe-4S iron sulfur cluster binding proteins, NifH/HnfC family	264691
157	10358887 (313, 314)	Novel Protein sim. GBank gij1073072[pir]JC5543 - cmaU protein - Pseudomonas syringae pv. syringae.	UNCLASSIFIED	264805
158	79761938 (315, 316)	Novel Protein sim. GBank gij1173023[sp]P46789[RL30_STRCO - 50S RIBOSOMAL PROTEIN L30	Contains protein domain (PF00400) - VD domain, G-beta repeat	265008
159	78890376 (317, 318)	Novel Protein sim. GBank gij1173023[sp]P46789[RL30_STRCO - 50S RIBOSOMAL PROTEIN L30	Contains protein domain (PF00327) - Ribosomal protein L30p/L7e	264605
160	11075119 (318, 320)	Novel Protein sim. GBank gij1173023[sp]P46789[RL30_STRCO - 50S RIBOSOMAL PROTEIN L30	Contains protein domain (PF00097) - Zinc finger, C3HC4 type (RING finger)	22278996, 264600, 264603, 35695917, 32833986, 35696423, 264638
161	80055007 (321, 322)	Novel Protein sim. GBank gij1173023[sp]P46789[RL30_STRCO - 50S RIBOSOMAL PROTEIN L30	Contains protein domain (PF00097) - Zinc finger, C3HC4 type (RING finger)	264112, 264532, 22279002
162	80016371 (323, 324)	Novel Protein sim. GBank gij1173023[sp]P46789[RL30_STRCO - 50S RIBOSOMAL PROTEIN L30	Contains protein domain (PF00097) - Zinc finger, C3HC4 type (RING finger)	264112, 264532, 22279002
163	11892306 (325, 326)	Novel Protein sim. GBank gij1173023[sp]P46789[RL30_STRCO - 50S RIBOSOMAL PROTEIN L30	Contains protein domain (PF00097) - Zinc finger, C3HC4 type (RING finger)	264639
164	80077902 (327, 328)	Novel Protein sim. GBank gij1173023[sp]P46789[RL30_STRCO - 50S RIBOSOMAL PROTEIN L30	Contains protein domain (PF00097) - Zinc finger, C3HC4 type (RING finger)	264905, 264907, 264600
165	10856067 (329, 330)	Novel Protein sim. GBank gij1173023[sp]P46789[RL30_STRCO - 50S RIBOSOMAL PROTEIN L30	Contains protein domain (PF00097) - Zinc finger, C3HC4 type (RING finger)	264691
166	88095003 (331, 332)	Novel Protein sim. GBank gij1173023[sp]P46789[RL30_STRCO - 50S RIBOSOMAL PROTEIN L30	Contains protein domain (PF00097) - Zinc finger, C3HC4 type (RING finger)	264605, 264486
167	16395460 (333, 334)	Novel Protein sim. GBank gij1173023[sp]P46789[RL30_STRCO - 50S RIBOSOMAL PROTEIN L30	Contains protein domain (PF00097) - Zinc finger, C3HC4 type (RING finger)	265010
168	80079362 (335, 336)	Novel Protein sim. GBank gij1173023[sp]P46789[RL30_STRCO - 50S RIBOSOMAL PROTEIN L30	Contains protein domain (PF00097) - Zinc finger, C3HC4 type (RING finger)	264600
169	80239581 (337, 338)	Novel Protein sim. GBank gij1173023[sp]P46789[RL30_STRCO - 50S RIBOSOMAL PROTEIN L30	Contains protein domain (PF00097) - Zinc finger, C3HC4 type (RING finger)	264556, 264557, 264558, 264559

170	78612364 (339, 340)	Novel Protein sim. GBank gi 140888 sp P27847 YIGK_ECOLI - HYPOTHETICAL 15.4 KD PROTEIN IN RECO-PLDB INTERGENIC REGION (F138)	Contains protein domain (PF01810) - LysE type translocator	264906	
171	95293073 (341, 342)			264595, 264604	
172	37797007 (343, 344)	Novel Protein sim. GBank gi 4210905 gb AAD12048.1 - (AF045609) AgIG [Sinorhizobium meliloti]	Contains protein domain (PF00526) - Binding-protein-dependent transport systems inner membrane component	264769	
173	57529660 (345, 346)	Novel Protein sim. GBank gi 132854 sp P02387 RL2_ECOLI - 50S RIBOSOMAL PROTEIN L2	Contains protein domain (PF00181) - Ribosomal Proteins L2	264768	
174	95293078 (347, 348)	Novel Protein sim. GBank gi 1881350 dbj BAA19371 - (AB001488) PROBABLE TRANSPORT PROTEIN, SIMILAR TO ANTIBIOTIC TRANSPORT-ASSOCIATED PROTEIN ACTII IN STREPTOMYCES COELICOLOR. [Bacillus subtilis]	transport	264510, 264593, 264602, 264603, 264605, 264762, 264693	
175	79758270 (349, 350)	Novel Protein sim. GBank gi 2072722 emb CAB08326 - (Z95121) manA [Mycobacterium tuberculosis]	isomerase	264555	
176	80066898 (351, 352)	Novel Protein sim. GBank gi 1055198 (U40187) - similar to PIR:A41724 chicken LD (limb deformity) gene product and to formin; also P-rich region similar to collagen [Caenorhabditis elegans]	UNCLASSIFIED	264907, 264910, 264681, 264558	
177	86684852 (353, 354)	Novel Protein sim. GBank gi 2326738 emb CAB10952 - (Z98268) hypothetical protein Rv1695 [Mycobacterium tuberculosis]	Contains protein domain (PF01513) - Domain of unknown function	264768, 60424179, 264687, 264688, 264769, 29331826, 60432289, 18108376, 264689, 18108387, 32833986, 22278996, 265020, 264600, 264601, 264602, 264603, 264604, 264605, 264635, 264762, 264636, 264908, 264564, 264637, 264638, 264486, 60433356, 264766	
178	78559528 (355, 356)	Novel Protein sim. GBank gi 1906596 (U81788) - kinesin-73 [Drosophila melanogaster]	struct	264693, 33657109, 264635	
179	20263112 (357, 358)		UNCLASSIFIED	264563	
180	80488958 (359, 360)	Novel Protein sim. GBank gi 1169367 sp P45256 DNAB_HAEIN - REPLICATIVE DNA HELICASE	helicase	264769	
181	79585369 (361, 362)	Novel Protein sim. GBank gi 3170615 (AF059486) - DOC4 [Mus musculus]	UNCLASSIFIED	21906787, 264635, 264638, 18108384	
182	80577899 (363, 364)				
183	11614017 (365, 366)	Novel Protein sim. GBank gi 1076627 pir IS54172 - inorganic pyrophosphatase (EC 3.6.1.1) - common tobacco	UNCLASSIFIED	264259, 35696052, 56182435, 264511, 265018, 33857109, 264555, 264566	
184	10174167 (367, 368)	Novel Protein sim. GBank gi 4371280 gb AAD18138 - (AC006260) hypothetical protein [Arabidopsis thaliana]	UNCLASSIFIED	264690	
				264510	

185	21660822 (369, 370)	Novel Protein sim. GBank gij3006178[emb]CAA18398.1] - (AL022304) putative mma transport regulator [Schizosaccharomyces pombe]		UNCLASSIFIED	264604
186	80070329 (371, 372)	Novel Protein sim. GBank gij2829802[sp]P94081YCLF_BACSU - HYPOTHETICAL 53.3 KD PROTEIN IN SFP-GERKA INTERGENIC REGION.		transport	264595
187	80186611 (373, 374)	Novel Protein sim. GBank gij3150260[emb]CAA19179] - (AL023634) cyclin [Schizosaccharomyces pombe]		UNCLASSIFIED	264369
188	20464942 (375, 376)	Novel Protein sim. GBank gij2145853[pil]S72938 - hix protein - Mycobacterium leprae		kinase	264605
189	82338215 (377, 378)	Novel Protein sim. GBank gij1881244[db]BAA19271] - (AB001488) SIMILAR TO PYRUVATE OXIDASE AND ACETOLACTATE SYNTHASE. [Bacillus subtilis]		UNCLASSIFIED	33696052, 264802, 264605, 264762, 264689, 33695917, 18108370, 18108372, 264638, 264585
190	80086821 (379, 380)	Novel Protein sim. GBank gij120226[sp]P28725FKBP_STRCH - FK506-BINDING PROTEIN (PEPTIDYL-PROLYL CIS-TRANS ISOMERASE) (PPIASE) (ROTAMASE)		synthase	264583
191	86095012 (381, 382)	Novel Protein sim. GBank gij1705461[sp]P53656[BIOA_ERWHE - ADENOSYLMETHIONINE-8-AMINO-7-OXONONANOATE AMINOTRANSFERASE (7.8-DIAMINO-PELARGONIC ACID AMINOTRANSFERASE) (DAPA AMINOTRANSFERASE)		isomerase	264508, 264604, 264605, 264769, 264555
192	16333379 (383, 384)	Novel Protein sim. GBank gij4980892[gb]AAD35474.1(AE00171) - (AE001718) ABC transporter, ATP-binding protein [Thermotoga maritima]			264567
193	79910127 (385, 386)	Novel Protein sim. GBank gij1705461[sp]P53656[BIOA_ERWHE - ADENOSYLMETHIONINE-8-AMINO-7-OXONONANOATE AMINOTRANSFERASE (7.8-DIAMINO-PELARGONIC ACID AMINOTRANSFERASE) (DAPA AMINOTRANSFERASE)			264808, 264693
194	20464949 (387, 388)	Novel Protein sim. GBank gij1705461[sp]P53656[BIOA_ERWHE - ADENOSYLMETHIONINE-8-AMINO-7-OXONONANOATE AMINOTRANSFERASE (7.8-DIAMINO-PELARGONIC ACID AMINOTRANSFERASE) (DAPA AMINOTRANSFERASE)			264605
195	13518389 (389, 390)	Novel Protein sim. GBank gij1705461[sp]P53656[BIOA_ERWHE - ADENOSYLMETHIONINE-8-AMINO-7-OXONONANOATE AMINOTRANSFERASE (7.8-DIAMINO-PELARGONIC ACID AMINOTRANSFERASE) (DAPA AMINOTRANSFERASE)		transport	264636
196	95005569 (391, 392)	Novel Protein sim. GBank gij3122305[sp]Q27778[K6PF_SCHMA - 6-PHOSPHOFRUCTOKINASE (PHOSPHOFRUCTOKINASE) (PHOSPHOHEXOKINASE)			264600, 264689, 264638
197	80248665 (393, 394)	Novel Protein sim. GBank gij3122305[sp]Q27778[K6PF_SCHMA - 6-PHOSPHOFRUCTOKINASE (PHOSPHOFRUCTOKINASE) (PHOSPHOHEXOKINASE)		gaba	
198	79163635 (395, 396)	Novel Protein sim. GBank gij1781203[emb]CAB06110] - (Z83859) gnd [Mycobacterium tuberculosis]		kinase	264602, 264682, 264692, 18108374
199	78890715 (397, 398)	Novel Protein sim. GBank gij1781203[emb]CAB06110] - (Z83859) gnd [Mycobacterium tuberculosis]			264636
200	79413848 (399, 400)	Novel Protein sim. GBank gij2842222 (AF030885) - telomere-associated recQ-like helicase [Ustilago maydis]			265008
201	86945924 (401, 402)	Novel Protein sim. GBank gij2884379[emb]CAA74911.1] - (Y14573) ring finger protein [Hordeum vulgare]		UNCLASSIFIED	264595, 264596
				UNCLASSIFIED	29331826, 265007, 264512, 33657402, 264596, 265017, 18108351, 264682, 264683, 264767, 264629, 55810784, 264634, 264635, 56182323, 60432113, 22279000

202	7858046 (403, 404)	Novel Protein sim. GBank: gij231772[sp]P30598[CHS1_USTMA - CHITIN SYNTHASE 1 (CHITIN-UDP ACETYL-GLUCOSAMINYL TRANSFERASE 1)]	Contains protein domain (PF01844) - synthase Chitin synthase	264600	
203	7884327 (405, 406)	Novel Protein sim. GBank gij1504042[jdb][BAA13220] - (D86984) similar to yeast adenylylase cyclase (S56776) [Homo sapiens]		22278995, 29331822, 29331825, 29331827, 264906, 21908754, 264683, 21906766, 21906769, 35696423, 264556	
204	78855186 (407, 408)	Novel Protein sim. GBank gij2633808[emb][CAB13310] - (Z99111) similar to hypothetical proteins [Bacillus subtilis]	UNCLASSIFIED transport	264909	
205	10090563 (409, 410)	Novel Protein sim. GBank gij2134381[pir][S60678 - polybromo 1 protein - chicken]	UNCLASSIFIED UNCLASSIFIED	264604 284556	
206	8758473 (411, 412)	Novel Protein sim. GBank		264605	
207	20754322 (413, 414)	Novel Protein sim. GBank gij2501040[sp]O05814[SYP_MYCTU - PROLYL-TRNA SYNTHETASE (PROLINE--TRNA LIGASE) (PRORS)]		264605, 264689	
208	20289261 (415, 416)				
209	80071069 (417, 418)				
210	80168800 (419, 420)			264905, 264907, 264909, 264766, 264687, 264691, 264629, 18108374, 264638	
211	80034539 (421, 422)			263978	
212	8242474 (423, 424)	Novel Protein sim. GBank gij5031809[re]NP_005538.1[pi]SLR - Immunoglobulin superfamily containing leucine-rich repeat	UNCLASSIFIED	264508, 264905, 264906, 264807, 264908, 264600, 264762, 264534, 264632, 264634, 264635, 264639, 264486	
213	80248562 (425, 426)	Novel Protein sim. GBank gij3122359[sp]O33123[LEU2_MYCLE - 3-ISOPROPYLMALATE DEHYDRATASE LARGE SUBUNIT (ISOPROPYLMALATE ISOMERASE) (ALPHA-IPM ISOMERASE) (IPM)]	Contains protein domain (PF00330) - isomerase Aconitase family (aconitate hydratase)	22278896, 264508, 264600, 264602, 264603, 264605, 33857023, 284565, 264486	
214	80079381 (427, 428)	Novel Protein sim. GBank gij116236[sp]P19421[CH60_COXBU - 60 KD CHAPERONIN (PROTEIN CPN60) (GROEL PROTEIN) (HEAT SHOCK PROTEIN B)]	Contains protein domain (PF00118) - eph TCP-1/cpn60 chaperonin family	264600, 264693	
215	14973283 (429, 430)				
216	8017716 (431, 432)	Novel Protein sim. GBank gij3417287 (AC002310) - Unknown gene product [Homo sapiens]	UNCLASSIFIED dna_ma_bind	264629 264448	
217	79603634 (433, 434)	Novel Protein sim. GBank gij2506924[sp]P48754[VP41_HUMAN - VACUOLAR ASSEMBLY PROTEIN VPS41 HOMOLOG (S53)]	Zinc finger, C2H2 type	264508	
218	80258475 (435, 436)	Novel Protein sim. GBank gij1173288[sp]P38106[RSEA_ECOLI - SIGMA-E FACTOR NEGATIVE REGULATORY PROTEIN]	mapolymerase	264594	
219	20438797 (437, 438)	Novel Protein sim. GBank gij11781097[emb][CAB06231] - (Z63864) glib [Mycobacterium tuberculosis]	synthase	264604	
220	13489572 (439, 440)	Novel Protein sim. GBank gij2984703 (AF052427) - unknown [Trypanosoma cruzi]	nucleaseinhib	264689	
221	11287498 (441, 442)	Novel Protein sim. GBank gij4587313[jdb][BAA76709.1] - (AB025248) alpha-1,2-mannosidase [Bacillus sp. M-90]	UNCLASSIFIED	284555	

222	79862802 (443, 444)	Novel Protein sim. GBank gij1877268[emb]CAB07049] - (Z92770) hypothetical protein RV0143c [Mycobacterium tuberculosis]		UNCLASSIFIED	264605, 264769, 35696423
223	83053889 (445, 448)			UNCLASSIFIED	264906, 264907, 264603
224	79557820 (447, 448)			UNCLASSIFIED	264684, 264693
225	79559541 (448, 450)	Novel Protein sim. GBank gij2274851[dbj]BAA21515] - (D64159) 3-7 gene product [Homo sapiens]		UNCLASSIFIED	264692
226	79172387 (451, 452)	Novel Protein sim. GBank gij868245 (U29488) - C56C10.7 gene product [Caenorhabditis elegans]		UNCLASSIFIED	22278998, 264112, 33657023, 263981
227	81777196 (453, 454)			UNCLASSIFIED	35695917, 264638, 264907
228	79872285 (455, 456)				264768, 264907, 264908, 264682, 264593, 264639
229	79838288 (457, 458)				264906, 264910
230	11013209 (459, 460)			UNCLASSIFIED	264631
231	20622207 (461, 462)	Novel Protein sim. GBank gij1835114[emb]CAA71733] - (Y10744) homoserine O-acetyltransferase [Leptospira meyeri]			264906, 264600, 264603, 264692
232	80055035 (463, 464)			UNCLASSIFIED	264600, 264603, 264605, 264687, 264769
233	80063054 (465, 466)	Novel Protein sim. GBank gij2642340 (AF032970) - imidazole propionate hydrolase [Pseudomonas putida]	Contains protein domain (PF00449) - Urease	hydrolase	264604
234	7523998 (467, 468)	Novel Protein sim. GBank gij3510505 (AF030881) - polypeptide [Fugu rubripes]		UNCLASSIFIED	264369
235	80203671 (469, 470)			UNCLASSIFIED	264106
236	78940001 (471, 472)	Novel Protein sim. GBank gij2104609[emb]CAB08805] - (Z95398) PckA [Mycobacterium leprae]		carboxylase	264905
237	11755273 (473, 474)				264681
238	79461401 (475, 476)			UNCLASSIFIED	264639
239	82435190 (477, 478)	Novel Protein sim. GBank gij2495617[sp]Q57252[VDJ]_HAEIN - HYPOTHETICAL PROTEIN H1163	Contains protein domain (PF00037) - 4Fe-4S ferredoxins and related iron-sulfur cluster binding domains.		264906, 265010, 264603, 264762, 264682, 264636, 264638, 264486
240	21635575 (479, 480)	Novel Protein sim. GBank gij3183458[sp]P75796[YLIA_ECOLI - HYPOTHETICAL ABC TRANSPORTER ATP-BINDING PROTEIN YLIA	transport		264259, 264769
241	80377307 (481, 482)	Novel Protein sim. GBank gij3875920[emb]CAB04111] - (Z81503) predicted using GeneFINDER; similar to collagen; cDNA EST EMBL:D85450 comes from this gene; cDNA EST EMBL:D68888 comes from this gene [Caenorhabditis elegans]		UNCLASSIFIED	264908, 264909, 264764, 264639
242	82148454 (483, 484)			UNCLASSIFIED	264489, 264907, 264908, 264511, 264760, 264764, 264692, 264635, 264637
243	79633207 (485, 486)			UNCLASSIFIED	264906
244	80248682 (487, 488)	Novel Protein sim. GBank gij2624302[emb]CAA15575] - (AL008967) ald [Mycobacterium tuberculosis]	dehydrogenase		264600, 264602, 264605, 264769, 264689
245	79863543 (489, 490)	Novel Protein sim. GBank gij2920625 (AF044499) - vgrE protein [Escherichia coli]		UNCLASSIFIED	264907, 264758
246	79162929 (491, 492)	Novel Protein sim. GBank gij5420387[emb]CAB46679.1] - (AJ243459) proteophosphoglycan [Leishmania major]	Contains protein domain (PF01106) - NIT-like domain		264637, 18108381, 18108387, 264565

247	79873185 (493, 494)	Novel Protein sim. GBank gll1039006[emb]CAB06648] - (Z85982) argB [Mycobacterium tuberculosis]		kinase	264909, 264691, 35696423, 18108387
248	80488983 (495, 496)	Novel Protein sim. GBank gll1168574[sp]P42464[ATPB_CORGL - ATP SYNTHASE BETA CHAIN		synthase	35696286, 264907, 264511, 264602, 264768, 264688, 265021, 35695855, 18108385
249	79764645 (497, 498)			UNCLASSIFIED	264907, 264910, 265011, 264762, 264638
250	79819980 (499, 500)				21908768, 264692
251	84359489 (501, 502)			UNCLASSIFIED	52645156, 29331822, 29331824, 52644045, 265018, 21908765, 21908768, 265020, 27486261, 27486265, 35695763, 18108376, 264556, 264559, 264565
252	79737758 (503, 504)	Novel Protein sim. GBank gll3327166[db]BAA31651] - (AB014576) KIAA0676 protein [Homo sapiens]			264685, 264687, 264632
253	20443124 (505, 506)	Novel Protein sim. GBank gll3036880[emb]CAA18513] - (AL02374) putative ATP-dependent DNA helicase [Streptomyces coelicolor]		helicase	264604
254	80027421 (507, 508)	Novel Protein sim. GBank gll3915488[sp]O34861[YJMB_BACSU - HYPOTHETICAL SYMPTER IN COTT-RAPA INTERGENIC REGION		UNCLASSIFIED	264508, 264906, 264602, 264687, 265021, 264486
255	11398315 (509, 510)	Novel Protein sim. GBank gll1665720[db]BAA04134] - (D17312) diarrheal toxin [Bacillus cereus]		UNCLASSIFIED	264593
256	80028158 (511, 512)	Novel Protein sim. GBank gll465787[sp]P34422[YL31_CAEEL - HYPOTHETICAL 86.0 KD PROTEIN F4489.1 IN CHROMOSOME III	Contains protein domain (PF00326) - peptidase		264602, 264692
257	20288282 (513, 514)	Novel Protein sim. GBank gll1172039[sp]P42315[SCOA_BACSU - PROBABLE SUCCINYL-COA:3-KETOACID-COENZYME A TRANSFERASE SUBUNIT A (SUCCINYL COA:3-OXOACID COA-TRANSFERASE) (OXCT A)	Contains protein domain (PF01144) - transferase		264605
258	20459484 (515, 516)	Novel Protein sim. GBank gll3127836[emb]CAA18902] - (AL023496) hypothetical protein [Streptomyces coelicolor]		UNCLASSIFIED	264604
259	79910152 (517, 518)			collagen	264681, 264686, 264692
260	20378437 (519, 520)			UNCLASSIFIED	264692, 264556
261	20285883 (521, 522)	Novel Protein sim. GBank gll123761[sp]P24221[HUTH_STRGR - HISTIDINE AMMONIA-LYASE (HISTIDASE)	Contains protein domain (PF00221) - Phenylalanine and histidine ammonia lyases	UNCLASSIFIED	264600
262	80189317 (523, 524)			UNCLASSIFIED	265017, 264369
263	88095045 (525, 526)	Novel Protein sim. GBank gll3924708[emb]CAA84646] - (Z35597) Weak similarity with sea squirt nidogen precursor protein (blastp score 71); cDNA EST EMBL: T02069 comes from this gene; cDNA EST EMBL: D76135 comes from this gene; cDNA EST EMBL: D73147 comes from this gene; cDNA EST EMBL: ...		UNCLASSIFIED	264488, 264905, 264906, 264907, 264908, 264909, 264512, 264910, 264758, 264596, 264604, 265019, 264605, 264760, 18108351, 264763, 264764, 264288, 264766, 264768, 264769, 264691, 264692, 264693, 264628, 264634, 264635, 264555, 264638, 264638, 264639
264	87370826 (527, 528)	Novel Protein sim. GBank gll3043734[db]BAA25531] - (AB011177) KIAA0605 protein [Homo sapiens]	Contains protein domain (PF00047) - Immunoglobulin domain	protease	264259, 264908, 21906754, 265018, 265019, 265020

265	95355646 (528, 530)	Novel Protein sim. GBank gij4589624jdbj[BAA76834.1] - (AB023207) KIAA0990 protein [Homo sapiens]		Kinase	264488, 35696286, 29331824, 56182181, 35696052, 264508, 264905, 264906, 264907, 66712502, 264908, 264908, 264511, 264512, 264910, 264592, 264595, 264758, 264596, 55811386, 264600, 265017, 264603, 264604, 264605, 264760, 18108351, 264762, 264681, 264764, 264288, 264766, 264768, 264769, 21906765, 21906767, 21906769, 265020, 264691, 33657023, 33657109, 33657182, 264628, 35696423, 35696855, 264630, 264631, 264632, 264634, 264635, 264636, 264555, 264638, 83373044, 56528488, 87168518, 264564, 264566, 264486, 264600
266	79588075 (531, 532)			UNCLASSIFIED	264828
267	11362222 (533, 534)			UNCLASSIFIED	264687, 264769, 264689
268	79909568 (535, 536)			UNCLASSIFIED	264602
269	80025810 (537, 538)			UNCLASSIFIED	264693
270	84361144 (539, 540)	Novel Protein sim. GBank gij4507367jrefNP_003182.1pTARS - ltheonyl-IRNA synthetase		UNCLASSIFIED	
271	79552301 (541, 542)	Novel Protein sim. GBank gij4980738jgIAAD35331.1IAE00170 - (AE001707) glucose-1-phosphate adenylyltransferase [Thermotoga maritima]		UNCLASSIFIED	264909, 264693
272	9674778 (543, 544)	Novel Protein sim. GBank gij1168224jispIP44569j5NTD_HAEIN - PROBABLE 5'-NUCLEOTIDASE PRECURSOR		synthase	264908
273	12840694 (545, 546)	Novel Protein sim. GBank gij3253159 (AF005355) - translation initiation factor eIF2C [Cryptosporidium parvum]		UNCLASSIFIED	264688
274	39524246 (547, 548)	Novel Protein sim. GBank gij3253159 (AF005355) - translation initiation factor eIF2C [Cryptosporidium parvum]		UNCLASSIFIED	264564
275	82767041 (549, 550)	Novel Protein sim. GBank gij134920jispIP21997jSSGP_VOLCA - SULFATED SURFACE GLYCOPROTEIN 185 (SSG 185)		UNCLASSIFIED	264807, 264908, 264909, 264766, 264768, 264691, 264632, 264636
276	86671073 (551, 552)	Novel Protein sim. GBank gij128021jispIP20964jOBG_BACSU - SPO08-ASSOCIATED GTP-BINDING PROTEIN			265008, 60432228
277	80079735 (553, 554)	Novel Protein sim. GBank gij128021jispIP20964jOBG_BACSU - SPO08-ASSOCIATED GTP-BINDING PROTEIN		ribosomalprot	264600, 18108387
278	12866947 (555, 556)	Novel Protein sim. GBank gij79839jiprj[S03812 - uvrb protein - Micrococcus luteus]		UNCLASSIFIED	264689
279	95292719 (557, 558)	Novel Protein sim. GBank gij79839jiprj[S03812 - uvrb protein - Micrococcus luteus]		nuclease	264508, 264604, 21906764, 264638, 264557, 264404
280	5603617 (559, 560)	Novel Protein sim. GBank gij3123180jispIPQ18964jYLN2_CAEEL - HYPOTHETICAL 46.2 KD TRP-ASP REPEATS CONTAINING PROTEIN D2013.2 IN CHROMOSOME II			264259
281	80249599 (561, 562)	Novel Protein sim. GBank gij3123180jispIPQ18964jYLN2_CAEEL - HYPOTHETICAL 46.2 KD TRP-ASP REPEATS CONTAINING PROTEIN D2013.2 IN CHROMOSOME II			18108392, 264634, 264555, 264556, 264557, 264558
282	18598682 (563, 564)			UNCLASSIFIED	265019
283	20614211 (565, 566)			UNCLASSIFIED	264555

284	91212160 (567, 568)	Novel Protein sim. GBank gi 2429094 (U58632) - acetyl xylan esterase; AxeA [Thermotoga neopolitana]	Contains protein domain (PF00300) - Phosphoglycerate mutase family	UNCLASSIFIED	35696052, 29331828, 284508, 284905, 284600, 284602, 284605, 284682, 284764, 56181562, 21906784, 18108376, 284636, 284559, 18108387
285	8757940 (569, 570)	Novel Protein sim. GBank gi 2072674[emb CAB08305] - (Z95120) rhlE [Mycobacterium tuberculosis]	Contains protein domain (PF00270) - DEAD/DEAH box helicase	UNCLASSIFIED	284603
286	80503235 (571, 572)	Novel Protein sim. GBank gi 765323[emb S74439] - silk fibroin heavy chain (C-terminal) [Bombyx mori=silkworms, Peptide Partal, 633 aa] [Bombyx mori]		UNCLASSIFIED	35696052, 284769, 284638
287	12745521 (573, 574)	Novel Protein sim. GBank gi 1870009[emb CAB06860] - (Z92539) hypothetical protein Rv1019 [Mycobacterium tuberculosis]		UNCLASSIFIED	284689
288	20756502 (575, 576)	Novel Protein sim. GBank gi 1870009[emb CAB06860] - (Z92539) hypothetical protein Rv1019 [Mycobacterium tuberculosis]	collagen	UNCLASSIFIED	284557
289	80043804 (577, 578)	Novel Protein sim. GBank gi 1870009[emb CAB06860] - (Z92539) hypothetical protein Rv1019 [Mycobacterium tuberculosis]	Contains protein domain (PF00440) - Bacterial regulatory proteins, teir family		284593, 284600
290	80430175 (578, 580)	Novel Protein sim. GBank gi 2506864[sp P40120]YDCG_ECOLI - 59.4 PROTEIN IN TRG-RIML INTERGENIC REGION PRECURSOR		UNCLASSIFIED	284768
291	20747431 (581, 582)	Novel Protein sim. GBank gi 625182 (L39015) - mitochondrial glutamyl-tRNA synthetase [Saccharomyces cerevisiae]		UNCLASSIFIED	284601
292	80052555 (583, 584)	Novel Protein sim. GBank gi 625182 (L39015) - mitochondrial glutamyl-tRNA synthetase [Saccharomyces cerevisiae]		UNCLASSIFIED	284605
293	80062518 (585, 586)	Novel Protein sim. GBank gi 1718065[sp P53528]UVRD_MYCLE - PUTATIVE DNA HELICASE II HOMOLOG	helicase		284909, 284605, 284687, 284689, 284692
294	79830303 (587, 588)	Novel Protein sim. GBank gi 117422[sp P10040]CRB_DROME - CRUMBS PROTEIN PRECURSOR (95F)	Contains protein domain (PF00008) - EGF-like domain	oncogene	35696052, 284906, 285011, 284628, 55811576
295	79444180 (589, 590)	Novel Protein sim. GBank gi 1181619[db BAA11565] - (D82384) a variant of TSC-22 [Gallus gallus]			52844507, 29331822, 284592, 285020, 284639
296	79607076 (591, 592)	Novel Protein sim. GBank gi 3649789[db BAA33403] - (AB012228) SecA [Vibrio alginolyticus]		synthase	284508
297	79631297 (593, 594)	Novel Protein sim. GBank gi 5689967[emb CAB52004.1] - (AL109663) putative membrane protein [Streptomyces coelicolor A3(2)]		UNCLASSIFIED	284905, 284687, 284638
298	80418898 (595, 596)			UNCLASSIFIED	284905, 284691, 284639, 284766

299	95293298 (597, 598)	Novel Protein sim. GBank gji220637[djjiBAA01477] - (D10627) zinc finger protein [Mus musculus]	Contains protein domain (PF000096) - Zinc finger, C2H2 type	264488, 263994, 56994075, 22278997, 22278998, 22278999, 20281099, 29331824, 29331825, 29331826, 60432289, 29331827, 29331828, 264905, 264906, 264907, 264908, 52844045, 264909, 264511, 265008, 264910, 264595, 264596, 264758, 33657084, 87168559, 265018, 265019, 264764, 264288, 264766, 264687, 56181562, 264769, 21906765, 21906768, 21906769, 33657023, 264692, 33657109, 27486291, 18108370, 264628, 264629, 55811576, 35695855, 264631, 264634, 264635, 264638, 264639, 83373044, 18108387, 87168518, 22279000, 22279002, 264565, 264566, 264567
300	20711340 (599, 600)		UNCLASSIFIED	264602
301	13511332 (601, 602)	Novel Protein sim. GBank gji145922 (M20981) - Iron diclitate transport protein precursor [Escherichia coli]	transport	264687
302	9875260 (603, 604)	Novel Protein sim. GBank gji1174661[spP44594]TGT_HAEIN - QUEUINE TRNA-RIBOSYL TRANSFERASE (TRNA:GUANINE TRANSGLYCOSYLASE) (GUANINE INSERTION ENZYME)		264908
303	79574895 (605, 606)			264689
304	20711344 (607, 608)	Novel Protein sim. GBank gji67985[pirj]HJNVAV - helicase (EC 3.6.1.-) - Autographa californica nuclear polyhedrosis virus	helicase	264602
305	80412520 (609, 610)	Novel Protein sim. GBank gji728867[spP40802]APG_ARATH - ANTER-SPECIFIC PROLINE-RICH PROTEIN APG PRECURSOR		264763
306	8515876 (611, 612)	Novel Protein sim. GBank gji1657554[gbjAAB18082.1] - (U73857) hypothetical protein [Escherichia coli]	UNCLASSIFIED	263978
307	80222901 (613, 614)		UNCLASSIFIED	265010, 21906768, 265020, 18108374, 263977
308	80064305 (615, 616)	Novel Protein sim. GBank gji1710612[spQ10793]RNH2_MYCTU - PROBABLE RIBONUCLEASE HII (RNASE HII)	Contains protein domain (PF01351) - Ribonuclease HII	264910, 264600, 264605, 264687, 264689, 264638, 18108387
309	80504138 (617, 618)	Novel Protein sim. GBank gji5420387[embjCAB46679.1] - (AJ243459) proteophosphoglycan [Leishmania major]		264769
310	80053816 (619, 620)			264603
311	11090659 (621, 622)	Novel Protein sim. GBank gji1144522 (U34957) - phosphoribosylaminoimidazole succinocarboxamide synthase [Mycobacterium tuberculosis]	synthase	264602
312	80054347 (623, 624)		UNCLASSIFIED	264566
313	80046168 (625, 626)			264603, 264567

314	87645112 (627, 628)	Novel Protein sim. GBank gl 3661583 (AF092175) - ikaros [Danio rerio]	Contains protein domain (PF00320) - GATA zinc finger	dna_rna_bind	264259, 60432289, 29331828, 264905, 264906, 264908, 264909, 265008, 264910, 60432229, 33657402, 60433438, 33109954, 265011, 265017, 264603, 265018, 264288, 264766, 264692, 35895763, 264628, 264829, 264639, 60170394, 22279002, 264568
315	82356091 (629, 630)	Novel Protein sim. GBank gl 1652620 dbj BAA175401 - (D90907) pyridine nucleotide transhydrogenase beta subunit [Synechocystis sp.]			264508, 264600, 264762, 264687, 264768, 52844229, 264769, 264689, 264635, 264636, 264638, 264486
316	79811071 (631, 632)	Novel Protein sim. GBank		UNCLASSIFIED	264693
317	20466944 (633, 634)	gl 118244 sp P24176 DAPE_ECOLI - SUCCINYL-DIAMINOPIMELATE DESUCCINYLASE (SDAP)		UNCLASSIFIED	264605
318	94141836 (635, 636)	Novel Protein sim. GBank gl 4680228 gb AAD27583.1 AF118274 - (AF118274) DNB-5 [Homo sapiens]	Contains protein domain (PF00526) - Dictyostellum (slime mold) repeats	transport	264908, 264909, 264910, 264593, 264594, 264760, 264288, 264768, 264769, 21806769, 264691, 264693, 264628, 65274791, 264635, 264636, 264638, 83373044, 22279002, 264568, 265018
319	17288360 (637, 638)	Novel Protein sim. GBank gl 1148693 emb CAA602201 - (X86499) rbsC [Clostridium perfringens]		transport	264687
320	13527675 (639, 640)	Novel Protein sim. GBank gl 2811033 sp O05314 GLGC_MYCTU - GLUCOSE-1-PHOSPHATE ADENYLYLTRANSFERASE (ADP-GLUCOSE SYNTHASE) (ADP-GLUCOSE PYROPHOSPHORYLASE)		synthase	
321	94134387 (641, 642)	Novel Protein sim. GBank gl 1680716 (U68234) - all-trans-retinoic acid 4-hydroxylase [Danio rerio]		cyto450	264509, 264908, 264907, 264908, 265009, 264596, 264764, 264628, 264634, 264635, 264638, 264639, 83373044, 264567
322	68489053 (643, 644)	Novel Protein sim. GBank gl 1160355 (U33058) - UNC-89 [Caenorhabditis elegans]		UNCLASSIFIED	55811150, 264691, 60431528, 55810764
323	94653725 (645, 646)			UNCLASSIFIED	264488, 265009, 264593, 264628, 264635
324	79174383 (647, 648)			UNCLASSIFIED	264687
325	79862691 (649, 650)			UNCLASSIFIED	264693
326	28774974 (651, 652)			UNCLASSIFIED	264288, 18108385
327	79776287 (653, 654)	Novel Protein sim. GBank gl 451544 (U04267) - proline-rich cell wall protein [Gossypium barbadense]		UNCLASSIFIED	264488, 264905, 264509, 264910
328	80253202 (655, 656)			UNCLASSIFIED	264592
329	10173821 (657, 658)			UNCLASSIFIED	264510
330	86597787 (659, 660)	Novel Protein sim. GBank gl 4191358 (AF087825) - claudin-7 [Mus musculus]		UNCLASSIFIED	264259, 264908
331	79754888 (661, 662)	Novel Protein sim. GBank gl 80741 pir S20912 - regulatory protein whiB - Streptomyces coelicolor		transcriptfactor	264910, 264687, 264689, 264636, 264567
332	80071440 (663, 664)	Novel Protein sim. GBank gl 114049 sp P19480 AHPF - SALT - ALKYL HYDROPEROXIDE REDUCTASE SUBUNIT F (ALKYL HYDROPEROXIDE REDUCTASE F52A PROTEIN)		reductase	35696423, 264636, 264638, 264565
333	13009555 (665, 666)				264687

334	80230771 (667, 668)	Novel Protein sim. GBank gij3222228[pilj322227 - glutamate dehydrogenase (NADP+)] (EC 1.4.1.4) - Corynebacterium glutamicum	Contains protein domain (PF00208) - Glutamate/Leucine/Phenylalanine/Va line dehydrogenase	dehydrogenase	264905, 264600, 264604, 264486
335	80057026 (669, 670)	Novel Protein sim. GBank gij2193938[embjCAB09602] - (Z96800) glpQ2 [Mycobacterium tuberculosis]		esterase	264907, 264603, 264693, 18108374, 264636, 18108387
336	80414319 (671, 672)			UNCLASSIFIED	265009, 264766, 264686
337	11050829 (673, 674)				264602
338	95413134 (675, 676)	Novel Protein sim. GBank gij5454074[refjNP_006303.1]psMRT - silencing mediator for retinoid and thyroid hormone receptors	Contains protein domain (PF00249) - Myb-like DNA-binding domain	nuc_recp	264559, 18108397, 22278998, 29331822, 20281099, 29331824, 56182181, 68714117, 29331825, 35696052, 29331828, 264508, 264509, 264905, 264906, 264907, 264908, 264909, 265006, 265008, 264910, 265009, 264758, 55812038, 65274444, 265011, 87168559, 265017, 265018, 265019, 264760, 55811150, 284681, 264762, 18108351, 264682, 264764, 264766, 264685, 264686, 264768, 52644229, 264689, 55811957, 35695917, 284692, 264693, 264628, 18108370, 18108374, 55811576, 35696423, 35695855, 264635, 264555, 264638, 264556, 264837, 264557, 18108380, 264638, 264558, 264639, 18108381, 83373044, 18108385, 87188518, 60432113
339	11398513 (677, 678)	Novel Protein sim. GBank gij4001713[dbjBAA35087.1] - (AB015679) DnaK [Porphyrromonas gingivalis]		eph	264593
340	80504148 (679, 680)	Novel Protein sim. GBank gij2842699[spjQ92353]UBPC - PUTATIVE UBIQUITIN CARBOXYL-TERMINAL HYDROLASE C8G9.08 (UBIQUITIN THIOLESTERASE) (UBIQUITIN-SPECIFIC PROCESSING PROTEASE) (DEUBIQUITINATING ENZYME)		ubiquitin	264905, 265019, 264769, 18108374
341	11075188 (681, 682)	Novel Protein sim. GBank gij2688580 (AE001166) - conserved hypothetical protein [Borrelia burgdorferi]	Contains protein domain (PF00290) - Tryptophan synthase alpha chain	isomerase	264605
342	80054186 (683, 684)	Novel Protein sim. GBank gij1684738[embjCAA70601] - (Y09452) Yed J hypothetical protein [Pseudomonas syringae]			264603, 264604
343	20466792 (685, 686)				
344	80428870 (687, 688)	Novel Protein sim. GBank gij2117275[embjCAB09104] - (Z95618) hypothetical protein Rv0807 [Mycobacterium tuberculosis]		UNCLASSIFIED	264605, 264605, 264768, 18108370, 18108374, 35695855
345	80258853 (689, 690)	Novel Protein sim. GBank gij3023317[spjQ48935]APHA MYCRA - ACETYL POLYAMINE AMINOHYDROLASE		histone	264593
346	79831058 (691, 692)	Novel Protein sim. GBank gij4239787[embjCAA75437] - (Y15166) NADP-glutamate dehydrogenase [Pseudomonas aeruginosa]	Contains protein domain (PF00208) - Glutamate/Leucine/Phenylalanine/Va line dehydrogenase	dehydrogenase	264905

347	78158185 (693, 694)	Novel Protein sim. GBank gi 731675 sp P38795 YH4_YEAST - HYPOTHETICAL 80.7 KD PROTEIN IN ERG7-NMD2 INTERGENIC REGION		UNCLASSIFIED	265006, 265008, 265010, 265018, 263967, 263981
348	80020208 (695, 696)	Novel Protein sim. GBank gi 1073610 pir S47672 - ugpB protein - Escherichia coli		transport	264602, 18108351, 18108387
349	17282112 (697, 698)	Novel Protein sim. GBank gi 3261599 emb CAB009171 - (Z77137) hypothetical protein Rv1277 [Mycobacterium tuberculosis]		nuclease	265007 265009, 264769, 264669, 18108370
350	80502370 (699, 700)	Novel Protein sim. GBank gi 2959367 emb CAA179211 - (AL022117) hypothetical protein [Schizosaccharomyces pombe]		glycoprotein	264769, 264905, 264908
351	80501805 (701, 702)	Novel Protein sim. GBank gi 4416302 gb AAD203071 - (AF105716) copia-type pol polyprotein [Zea mays]		protease	264595
352	11811585 (703, 704)	Novel Protein sim. GBank gi 1174887 sp P42873 URE1_STAXY - UREASE ALPHA SUBUNIT (UREA AMIDOHYDROLASE)	Contains protein domain (PF00449) - Urease	UNCLASSIFIED	264604
353	80061653 (705, 706)	Novel Protein sim. GBank gi 1174887 sp P42873 URE1_STAXY - UREASE ALPHA SUBUNIT (UREA AMIDOHYDROLASE)		UNCLASSIFIED	264628
354	56626130 (707, 708)	Novel Protein sim. GBank gi 115157 sp P16574 BVGA_BORPE - VIRULENCE FACTORS PUTATIVE POSITIVE TRANSCRIPTION REGULATOR BVGA	Contains protein domain (PF00072) - Response regulator receiver domain	UNCLASSIFIED	264909, 264591, 264592
355	80046344 (709, 710)	Novel Protein sim. GBank gi 115157 sp P16574 BVGA_BORPE - VIRULENCE FACTORS PUTATIVE POSITIVE TRANSCRIPTION REGULATOR BVGA		oxidase	264605
356	80043635 (711, 712)	Novel Protein sim. GBank gi 2290990 (AF006000) - Brg 1 [Bordetella pertussis]		UNCLASSIFIED	264768
357	80070566 (713, 714)	Novel Protein sim. GBank gi 113764 sp P25718 AMY1_ECOLI - ALPHA-AMYLASE PRECURSOR (1.4-ALPHA-D-GLUCAN GLUCANOHYDROLASE)		UNCLASSIFIED	264604, 264769
358	37032756 (715, 716)	Novel Protein sim. GBank gi 3510639 (AF049344) - UDP- GalNAc:polypeptide N-acetylglucosaminyltransferase T5 [Rattus norvegicus]		UNCLASSIFIED	264594
359	80501488 (717, 718)	Novel Protein sim. GBank gi 113764 sp P25718 AMY1_ECOLI - ALPHA-AMYLASE PRECURSOR (1.4-ALPHA-D-GLUCAN GLUCANOHYDROLASE)		transferase	22278996, 264259, 29331822, 29331824, 264605, 55811657, 265022
360	80026748 (719, 720)	Novel Protein sim. GBank gi 113764 sp P25718 AMY1_ECOLI - ALPHA-AMYLASE PRECURSOR (1.4-ALPHA-D-GLUCAN GLUCANOHYDROLASE)		amylase	264688
361	80584075 (721, 722)	Novel Protein sim. GBank gi 113764 sp P25718 AMY1_ECOLI - ALPHA-AMYLASE PRECURSOR (1.4-ALPHA-D-GLUCAN GLUCANOHYDROLASE)			
362	13089485 (723, 724)	Novel Protein sim. GBank gi 113764 sp P25718 AMY1_ECOLI - ALPHA-AMYLASE PRECURSOR (1.4-ALPHA-D-GLUCAN GLUCANOHYDROLASE)			
363	78750145 (725, 726)	Novel Protein sim. GBank gi 2829818 sp P85171 NUOK_MYCTU - NADH DEHYDROGENASE I CHAIN K (NADH-UBIQUINONE OXIDOREDUCTASE CHAIN 11) (NUO11)	Contains protein domain (PF00420) - NADH-ubiquinone/plastoquinone oxidoreductase chain 4L	denhydrogenase	264568 264769, 264602, 264604, 264508, 264762, 264636, 264486
364	82443593 (727, 728)	Novel Protein sim. GBank gi 2829818 sp P85171 NUOK_MYCTU - NADH DEHYDROGENASE I CHAIN K (NADH-UBIQUINONE OXIDOREDUCTASE CHAIN 11) (NUO11)			

365	88040288 (729, 730)	Novel Protein sim. GBank gii4929268[gb AAD33924.1] - (AF144237) LOMP protein [Homo sapiens]	Contains protein domain (PF00412) - LIM domain containing proteins	264488, 21906766, 21906767, 55811576, 21906769, 29148629, 22278995, 22278996, 265020, 265022, 264634, 264691, 264593, 33657023, 33657402, 264693, 264639, 264594, 29331824, 264758, 18108385, 29331827, 87168559, 265018, 22278000, 265019, 264482, 264761, 264681, 18108351, 265017, 264757
366	81821838 (731, 732)	Novel Protein sim. GBank gii4503843[ref NP_003908.1 pG2AD - UNKNOWN	Contains protein domain (PF01602) - Adaplin N terminal region	60424179, 65274572, 56182575, 22278994, 56994075, 22278996, 264259, 29331822, 29331824, 56182181, 60424269, 68714117, 29331825, 60432289, 29331826, 29331827, 29331828, 264805, 264828, 56182435, 265008, 264512, 265008, 264591, 55812038, 55811386, 265010, 87168559, 265017, 265018, 264604, 265019, 55811150, 264448, 264369, 264288, 264686, 264768, 56181582, 21906768, 21906769, 55811957, 35685917, 265022, 80170815, 33657023, 85274620, 18108365, 263967, 33657109, 33657349, 35695763, 264628, 18108376, 55811576, 65274791, 35695855, 56182323, 83373044, 60432113, 264563, 264564, 264567, 264509
368	79607265 (735, 736)	Novel Protein sim. GBank gii3913029[sp P84967 ALR_MYCSM - ALANINE RACEMASE	UNCLASSIFIED	264508, 264604, 264605, 264636
369	95292917 (737, 738)	Novel Protein sim. GBank gii3249559 (AF018261) - EH domain binding protein Epsin [Rattus norvegicus]		264905, 264592, 264605, 264766, 264691
370	88090966 (739, 740)	Novel Protein sim. GBank gii2995299[emb CAA18328] - (AL022268) putative IRNA delta(2)- isopentenylpyrophosphate transferase [Streptomyces coelicolor]	transferase	264905, 264906, 264510, 264600, 264601, 264802, 264603, 265018, 264604, 264605, 265021, 264692, 264636, 264564
371	95292599 (741, 742)	Novel Protein sim. GBank gii5456934[gb AAD43716.1] - (AF152322) protocadherin gamma A2 [Homo sapiens]		264564
372	80021107 (743, 744)	Novel Protein sim. GBank gii2506393[sp P31576 FIXX_ECOLI - FERREDOXIN LIKE PROTEIN	UNCLASSIFIED	264909
373	79863766 (745, 746)	Novel Protein sim. GBank gii3341640[emb CAA13164] - (AJ231122) z811 [Vibrio cholerae]	UNCLASSIFIED	264905, 264906
374	79847568 (747, 748)	Novel Protein sim. GBank gii5456934[gb AAD43716.1] - (AF152322) protocadherin gamma A2 [Homo sapiens]	cadherin	65274572, 264259, 29331826, 56182435, 60433356, 60433438, 264757, 55812038, 264758, 55811957, 264690, 33657023
375	91230181 (749, 750)	Novel Protein sim. GBank gii1805408[dbj BAA08970] - (D50453) homologues to nitrate hydratase region 3'-hypothetical protein P47K of P. chlororaphis [Bacillus subtilis]	UNCLASSIFIED	264769
376	80505214 (751, 752)			
377	10339083 (753, 754)			264906

376	80056153 (755, 756)	Novel Protein sim. GBank gi 1076013 pir A49930 - carb protein homolog - Mycobacterium bovis (strain BCG) (fragment)	Contains protein domain (PF00289) - synthase	UNCLASSIFIED	265008, 264555
379	80503437 (757, 758)	Novel Protein sim. GBank gi 216556 dbj BAA02174 - (D12651) glucose dehydrogenase [Escherichia coli]	Contains protein domain (PF01011) - dehydrogenase	UNCLASSIFIED	264769
380	80060937 (759, 760)	Novel Protein sim. GBank gi 3327136 dbj BAA31636 - (AB014561) KIAA0681 protein [Homo sapiens]	Contains protein domain (PF00846) - homeobox	UNCLASSIFIED	264604
381	11769027 (761, 762)	Novel Protein sim. GBank gi 4240169 dbj BAA74863.1 - (AB020647) KIAA0840 protein [Homo sapiens]	Contains protein domain (PF00846) - homeobox	UNCLASSIFIED	264684
382	80054377 (763, 764)	Novel Protein sim. GBank gi 1073456 pir S47810 - probable alcohol dehydrogenase (EC 1.1.1.1) - Escherichia coli	Contains protein domain (PF00846) - homeobox	UNCLASSIFIED	264592
383	83259025 (765, 766)	Novel Protein sim. GBank gi 1460074 emb CA801049 - (Z77250) hypothetical protein RV2566 [Mycobacterium tuberculosis]	Contains protein domain (PF00846) - homeobox	UNCLASSIFIED	264595, 265017, 265021, 264638, 87168518, 22279002
384	95314255 (767, 768)	Novel Protein sim. GBank gi 4240169 dbj BAA74863.1 - (AB020647) KIAA0840 protein [Homo sapiens]	Contains protein domain (PF00846) - homeobox	UNCLASSIFIED	264288, 264766, 263987, 85274791, 35695855, 263981, 83373044, 284567
385	10237679 (769, 770)	Novel Protein sim. GBank gi 1073456 pir S47810 - probable alcohol dehydrogenase (EC 1.1.1.1) - Escherichia coli	Contains protein domain (PF00846) - homeobox	UNCLASSIFIED	264692
386	79633434 (771, 772)	Novel Protein sim. GBank gi 1073456 pir S47810 - probable alcohol dehydrogenase (EC 1.1.1.1) - Escherichia coli	Contains protein domain (PF00846) - homeobox	UNCLASSIFIED	264908
387	17960637 (773, 774)	Novel Protein sim. GBank gi 1073456 pir S47810 - probable alcohol dehydrogenase (EC 1.1.1.1) - Escherichia coli	Contains protein domain (PF00846) - homeobox	UNCLASSIFIED	264760
388	87741376 (775, 776)	Novel Protein sim. GBank gi 1073456 pir S47810 - probable alcohol dehydrogenase (EC 1.1.1.1) - Escherichia coli	Contains protein domain (PF00846) - homeobox	UNCLASSIFIED	35696286, 264905, 86712502, 60432229, 264593, 60433356, 264688, 21906765, 264691, 22279000, 264482
389	76316971 (777, 778)	Novel Protein sim. GBank gi 1073456 pir S47810 - probable alcohol dehydrogenase (EC 1.1.1.1) - Escherichia coli	Contains protein domain (PF00846) - homeobox	UNCLASSIFIED	18108394, 22278996, 264630, 264556, 22279002
390	80079948 (779, 780)	Novel Protein sim. GBank gi 1073456 pir S47810 - probable alcohol dehydrogenase (EC 1.1.1.1) - Escherichia coli	Contains protein domain (PF00846) - homeobox	UNCLASSIFIED	264600
391	7657302 (781, 782)	Novel Protein sim. GBank gi 1073456 pir S47810 - probable alcohol dehydrogenase (EC 1.1.1.1) - Escherichia coli	Contains protein domain (PF00846) - homeobox	UNCLASSIFIED	264482
392	79796056 (783, 784)	Novel Protein sim. GBank gi 1073456 pir S47810 - probable alcohol dehydrogenase (EC 1.1.1.1) - Escherichia coli	Contains protein domain (PF00846) - homeobox	UNCLASSIFIED	264908
393	33206031 (785, 786)	Novel Protein sim. GBank gi 1073456 pir S47810 - probable alcohol dehydrogenase (EC 1.1.1.1) - Escherichia coli	Contains protein domain (PF00846) - homeobox	UNCLASSIFIED	264602, 21906764
394	10104463 (787, 788)	Novel Protein sim. GBank gi 1073456 pir S47810 - probable alcohol dehydrogenase (EC 1.1.1.1) - Escherichia coli	Contains protein domain (PF00846) - homeobox	UNCLASSIFIED	264693
395	80228010 (789, 790)	Novel Protein sim. GBank gi 1073456 pir S47810 - probable alcohol dehydrogenase (EC 1.1.1.1) - Escherichia coli	Contains protein domain (PF00846) - homeobox	UNCLASSIFIED	264508, 264563
396	20436224 (791, 792)	Novel Protein sim. GBank gi 1073456 pir S47810 - probable alcohol dehydrogenase (EC 1.1.1.1) - Escherichia coli	Contains protein domain (PF00846) - homeobox	UNCLASSIFIED	264556
397	80417014 (793, 794)	Novel Protein sim. GBank gi 1073456 pir S47810 - probable alcohol dehydrogenase (EC 1.1.1.1) - Escherichia coli	Contains protein domain (PF00846) - homeobox	UNCLASSIFIED	265007, 265009, 264508, 264556, 264629, 264766
398	91230517 (795, 796)	Novel Protein sim. GBank gi 1073456 pir S47810 - probable alcohol dehydrogenase (EC 1.1.1.1) - Escherichia coli	Contains protein domain (PF00846) - homeobox	UNCLASSIFIED	18108398, 22278995, 22278996, 56994075, 22278999, 264259, 29331824, 29331826, 264905, 264908, 265007, 285008, 265009, 21906754, 33657084, 265017, 264448, 264288, 264766, 21906765, 21906766, 21906767, 265020, 265021, 33657023, 33657109, 264628, 35696423, 35695855, 264952, 18108380, 264567, 18108391

399	80055278 (797, 798)	Novel Protein sim. GBank gi 3358091 dbj BAA31995 - (AB015974) glycerol kinase [Pseudomonas tolaasii]	Contains protein domain (PF00370) - Kinase FGGY family of carbohydrate kinases	264592, 264595	
400	94117490 (799, 800)	Novel Protein sim. GBank gi 728835 sp P39192 ALU5_HUMAN - !!!!! ALU SUBFAMILY SC WARNING ENTRY !!!!!	Contains protein domain (PF00580) - cadherin Leucine Rich Repeat	18108394, 56182575, 22278995, 22278997, 22278998, 264259, 29331824, 265006, 265007, 265008, 60432229, 33657402, 21908754, 265010, 265017, 265018, 265019, 18108351, 18108357, 21906765, 265021, 265022, 264691, 264692, 33657023, 18108370, 65274791, 264634, 264636, 60170394, 56182323	
401	11397481 (801, 802)	Novel Protein sim. GBank gi 4928292 gb AAD33527.1 AF13211 - (AF132117) FhuA [Staphylococcus aureus]	transport	264594	
402	95420294 (803, 804)	Novel Protein sim. GBank gi 5699487 dbj BAA83027.1 - (AB028998) K1AA1075 protein [Homo sapiens]	Contains protein domain (PF00017) - phosphatase Src homology domain 2	85274572, 56182575, 35696206, 22278996, 22278998, 264093, 264259, 29331822, 29331824, 29331825, 29331826, 60432289, 29331827, 29331828, 264908, 264907, 264909, 265008, 264511, 265007, 265008, 264910, 264591, 33657402, 60433356, 60433438, 264596, 21906754, 52644296, 265010, 265011, 87168559, 265017, 265018, 265019, 264681, 18108351, 264682, 264448, 264288, 264684, 264766, 264767, 264686, 21906765, 21906766, 21908767, 21908768, 21906769, 55811957, 265020, 265021, 265022, 264690, 264693, 65274620, 35695763, 264628, 18108370, 264629, 18108379, 35696423, 55811576, 264635, 264636, 264537, 264639, 18108385, 22279002, 264583, 264564, 264565, 264566	
403	80439913 (805, 806)		UNCLASSIFIED	264768, 264632, 264639, 264563	
404	11809865 (807, 808)			264682	
405	79471280 (809, 810)	Novel Protein sim. GBank gi 266164 emb CAA15755 - (AL009198) dnaE2 [Mycobacterium tuberculosis]	polymerase	265009, 264682	
406	78634172 (811, 812)		Contains protein domain (PF00159) - Pancreatic hormone peptidases	18108357, 264693	
407	80478229 (813, 814)		UNCLASSIFIED	264769	
408	80079956 (815, 816)		UNCLASSIFIED	264600	
409	5640527 (817, 818)	Novel Protein sim. GBank gi 3047117 (AF058919) - similar to ATP-dependent RNA helicases [Arabidopsis thaliana]	helicase	264259	

410	95357486 (818, 820)	Novel Protein sim. GBank gi 475016 gb BAA06184 - (D29801) Unknown [Mus musculus]	UNCLASSIFIED	264489, 52646365, 52646842, 56181686, 35696286, 52645080, 29331822, 29331824, 56182181, 29331825, 60424269, 35696052, 33659970, 264508, 264509, 264905, 264906, 264907, 264908, 52644045, 264909, 264510, 265007, 264512, 265008, 264910, 33657402, 264756, 52646317, 55811386, 265010, 265011, 265017, 264604, 265018, 55811150, 264762, 264764, 264766, 264687, 264768, 264769, 52644229, 21906768, 265020, 265021, 264534, 52644150, 264692, 33657023, 65274820, 33657109, 33657182, 27489281, 35695783, 264628, 264629, 60431528, 18108376, 263978, 35696423, 35695855, 264632, 264634, 264635, 264637, 264638, 264558, 264639, 56182323, 264559, 60432113, 22279002, 264583, 264565, 264486
411	80501670 (821, 822)		UNCLASSIFIED	264769
412	80241662 (823, 824)			264907, 264910, 263973, 22279002
413	11076446 (825, 826)	Novel Protein sim. GBank gi 3261784 emb CAB08997 - (Z95558) htpX [Mycobacterium tuberculosis]	eph	264605
414	82050554 (827, 828)	Novel Protein sim. GBank gi 129038 sp P20707 ODO1_AZOVI - 2-OXOGLUTARATE DEHYDROGENASE E1 COMPONENT (ALPHA-KETOGLUTARATE DEHYDROGENASE)	dehydrogenase	18108374, 264760, 264769, 264602, 264638, 264603, 264909, 264605
415	84453144 (829, 830)	Novel Protein sim. GBank gi 4868350 gb AAD31273.1 AF13202 - (AF132025) rhophilin [Drosophila melanogaster]	UNCLASSIFIED	264908, 87168518
416	80402775 (831, 832)	Novel Protein sim. GBank gi 2555172 (AF025543) - ArcC; carbamate kinase [Rhizobium elii]	kinase	264488, 264600, 264602, 264764, 264636
417	20153787 (833, 834)	Novel Protein sim. GBank gi 1709171 sp P5231 MTX2_XANOR - MODIFICATION METHYLASE XORII (CYTOSINE-SPECIFIC METHYLTRANSFERASE XORII) (M.XORII)		264605
418	94125841 (835, 836)		UNCLASSIFIED	264689, 264693
419	95314273 (837, 838)		collagen	264908, 264910, 264764, 264639
420	37036349 (839, 840)	Novel Protein sim. GBank gi 3261659 emb CAB03751 - (Z81368) hypothetical protein Rv2419c [Mycobacterium tuberculosis]	phosphatase	264769
421	95292942 (841, 842)	Novel Protein sim. GBank gi 2916942 emb CAA17580 - (AL021999) hypothetical protein Rv0981 [Mycobacterium tuberculosis]	phosphatase	264906, 264600, 264601, 264603, 264604, 264760, 264769
422	78471293 (843, 844)	Novel Protein sim. GBank gi 231752 sp Q00767 CH61_STRAL - 60 KD CHAPERONIN 1 (PROTEIN CPN60 1) (GROEL PROTEIN 1) (HSP58)	eph	22278996, 264682, 18108376, 18108387
423	79604948 (845, 846)		UNCLASSIFIED	264509

424	7898557 (847, 848)	Novel Protein sim. GBank gi 4826814 ref NP_004877.1 pKTN1 - kinesin receptor		struct	265019
425	80431450 (849, 850)	Novel Protein sim. GBank gi 1703701 bbs 178462 - KRP5=kinesin-related protein [rats, testes, Peptide Partial, 167 aa]	Contains protein domain (PF00225) - Kinesin motor domain	struct	264908, 265007, 55811386, 264768, 55810764
426	80064522 (851, 852)			UNCLASSIFIED	264605, 264559
427	80057232 (853, 854)	Novel Protein sim. GBank gi 231829 sp P29929 COBN_PSEDE - COBN PROTEIN		UNCLASSIFIED	264603, 264636
428	79487788 (855, 856)	Novel Protein sim. GBank gi 81286 pir S22697 - extensin - Volvox carterii (fragment)		UNCLASSIFIED	264683
429	80091252 (857, 858)	Novel Protein sim. GBank gi 1806154 emb CAB06451 - (Z84395) hypothetical protein Rv0688 [Mycobacterium tuberculosis]	reductase	UNCLASSIFIED	35696423, 35695763, 35695855, 265017, 264584, 264762
430	80504192 (859, 860)	Novel Protein sim. GBank gi 2495272 sp Q99626 CDX2, HUMAN - HOMEBOX PROTEIN CDX-2 (CAUDAL-TYPE HOMEBOX PROTEIN 2) (CDX-3)			264508, 264905, 264509, 264908, 264909, 265008, 264600, 264687, 264769, 264689, 264636, 264638, 18108385, 264488
431	20624249 (861, 862)				264566
432	16525372 (863, 864)	Novel Protein sim. GBank gi 3123352 emb CAA18609 - (AL022378) dJ393P12.2 (hypothetical Proline-rich protein KIAA0269 LIKE) [Homo sapiens]		UNCLASSIFIED	265020
433	81494303 (865, 866)	Novel Protein sim. GBank gi 2495272 sp Q99626 CDX2, HUMAN - HOMEBOX PROTEIN CDX-2 (CAUDAL-TYPE HOMEBOX PROTEIN 2) (CDX-3)	Contains protein domain (PF00169) - PH domain	UNCLASSIFIED	264907, 264908, 264909, 264910, 264592, 264595, 264758, 264604, 264760, 264762, 264763, 264636, 264637, 22279002
434	94326323 (867, 868)	Novel Protein sim. GBank gi 114105 sp P08532 ARAH, ECOLI - L-ARABINOSE TRANSPORT SYSTEM PERMEASE PROTEIN ARAH		UNCLASSIFIED	55812038, 56182181, 56181562, 29331828, 35696052, 55810764, 55811576, 65274791, 35695855, 60432113, 55811150, 264636, 264766
435	80502738 (869, 870)	Novel Protein sim. GBank gi 56339846 gb AAD45904.1 AF16132 - (AF161328) histidine kinase CstS [Corynebacterium diphtheriae]	transport	transport	264595, 264769
436	41085853 (871, 872)			UNCLASSIFIED	265020, 22279002
437	11399281 (873, 874)			UNCLASSIFIED	264593
438	11773835 (875, 876)			UNCLASSIFIED	264686
439	80018485 (877, 878)	Novel Protein sim. GBank gi 3242702 (AC003040) - hypothetical protein [Arabidopsis thaliana]		UNCLASSIFIED	264905, 264600, 264602, 264604
440	79841062 (879, 880)	Novel Protein sim. GBank gi 2291232 gb AA065351.1 - (AF016427) Contains similarity to Pfam domain: PF00004 (AAA). Score=288.1, E-value=3.7e-77, N=1 [Caenorhabditis elegans]	Contains protein domain (PF00004) - ATPase associated ATPases associated with various cellular activities (AAA)	ATPase associated	35696052, 264905, 264908, 264909, 265011, 35696423
441	20396935 (881, 882)	Novel Protein sim. GBank gi 56339846 gb AAD45904.1 AF16132 - (AF161328) histidine kinase CstS [Corynebacterium diphtheriae]			264605
442	85281058 (883, 884)	Novel Protein sim. GBank gi 1784790 (U46068) - von Ebner minor salivary gland protein [Mus musculus]		UNCLASSIFIED	29331830, 264909
443	82456427 (885, 886)	Novel Protein sim. GBank gi 5689993 emb CAB52056.1 - (AL109732) putative ATP-binding RNA helicase [Streptomyces coelicolor A3(2)]		UNCLASSIFIED	35696052, 264508, 264906, 264512, 264604, 264762, 264769, 264689, 264636
444	11395897 (887, 888)	Novel Protein sim. GBank gi 1783249 db BAA11726 - (D83026) homologous to citrate-sodium symport (citrate transporters); hypothetical [Bacillus subtilis]		UNCLASSIFIED	264591

445	79552709 (889, 890)	Novel Protein sim. GBank gij5531272[embjCAB50897.1] - (AJ243800) WSC4 homologue [Kluyveromyces fragilis]		UNCLASSIFIED	264693
446	79810937 (891, 892)	Novel Protein sim. GBank gij538413 (L36315) - zinc finger protein [Mus musculus]	Contains protein domain (PF00096) - Zinc finger, C2H2 type	transcription factor	264509
447	80438888 (893, 894)	Novel Protein sim. GBank gij1542814[embjCAB02185] - (Z80108) fnt [Mycobacterium tuberculosis]	Contains protein domain (PF00551) - Formyl transferase	dehydrogenase	264768, 55811576
448	80238110 (895, 896)	Novel Protein sim. GBank gij118794[sp1043]DP3A_ECOLI - DNA POLYMERASE III, ALPHA CHAIN		polymerase	264508, 264600, 264603, 264605, 264682, 264769, 18108362, 264634, 18108387
449	20460634 (897, 898)	Novel Protein sim. GBank gij4568505[dbjBAA76775.1] - (AB023148) KIAA0931 protein [Homo sapiens]			264605, 264559
450	84631210 (899, 900)	Novel Protein sim. GBank gij2650614 (AE001104) - conserved hypothetical protein [Archaeoglobus fulgidus]	Contains protein domain (PF00481) - Protein phosphatase 2C	phosphatase	65274572, 22278998, 29331824, 29331826, 264906, 264910, 264592, 52846317, 285017, 21906767, 55811957, 56526486, 22279002
451	21433609 (901, 902)	Novel Protein sim. GBank gij2493000[sp1Q09450]SCOT_CAEEL - PROBABLE SUCCINYL-COA:3-KETOACID-COENZYME A TRANSFERASE PRECURSOR (3-OXOACID COA-TRANSFERASE)		UNCLASSIFIED	264486
452	10267276 (903, 904)	Novel Protein sim. GBank gij4486899[embjCAB38153.1] - (AL035591) putative integral membrane export protein [Streptomyces coelicolor]		UNCLASSIFIED	264692
453	52560098 (905, 906)	Novel Protein sim. GBank gij3411053 (AF034863) - synaptic scaffolding molecule [Rattus norvegicus]		UNCLASSIFIED	264905
454	39523922 (907, 908)	Novel Protein sim. GBank gij4506075[refNP_002733.1]pPRKC - protein kinase C, mu	Contains protein domain (PF00595) - PDZ domain (Also known as DHR or GLGF)	kinase	55812038, 265010, 265018, 264681
455	13088692 (909, 910)	Novel Protein sim. GBank gij113158[sp1P25516]ACO1_ECOLI - ACONITATE HYDRATASE 1 (CITRATE HYDROLYASE 1) (ACONITASE 1)	Contains protein domain (PF00130) - Phorbol esters/diacylglycerol binding domain (C1 domain)	kinase	22278997, 264259, 29331826, 265018, 264448, 264369, 21906765, 35696423
456	79563081 (911, 912)	Novel Protein sim. GBank gij1186574[sp1P42464]ATPB_CORGL - ATP SYNTHASE BETA CHAIN		UNCLASSIFIED	264906
457	79831273 (913, 914)	Novel Protein sim. GBank gij1186574[sp1P42464]ATPB_CORGL - ATP SYNTHASE BETA CHAIN		synthase	264602, 264605, 264768, 264769, 265021, 33657023, 264559
458	79581227 (915, 916)				
459	80567359 (917, 918)				
460	79245890 (919, 920)				
461	95287618 (921, 922)				

462	79605589 (923, 924)	Novel Protein sim. GBank gll1346891spIP45597PTF1_XANCP - MULTIPHOSPHORYL TRANSFER PROTEIN (MTP) (CONTAINS: PHOSPHOENOLPYRUVATE-PROTEIN PHOSPHOTRANSFERASE (PHOSPHOTRANSFERASE SYSTEM, ENZYME II); PHOSPHOCARRIER PROTEIN HPR (PROTEIN H); PTS SYSTEM, FRUCTOSE-SPECIFIC IIA COMPONENT ...	Contains protein domain (PF00391) - PEP-utilizing enzymes	264807
463	79796417 (925, 926)	Novel Protein sim. GBank gll854065[emb]CAA58337] - (X83413) U88 [Human herpesvirus 6]	UNCLASSIFIED	264805, 264806, 264808, 264809, 264910, 264591, 264595, 265011, 264632, 264635, 264636, 264637, 264638, 264639
464	82340151 (927, 928)	Novel Protein sim. GBank gll589776[emb]CAB52137.1] - (AJ242832) calpain [Homo sapiens]	UNCLASSIFIED	264634
465	83005730 (929, 930)	Novel Protein sim. GBank gll1806175[emb]CAB06470] - (Z84395) rpsC [Mycobacterium tuberculosis]	calhepsin	265017, 21906764, 265020
466	20460645 (931, 932)	Novel Protein sim. GBank gll1806175[emb]CAB06470] - (Z84395) rpsC [Mycobacterium tuberculosis]	ribosomal prot	264605, 264559
467	80408035 (933, 934)	Novel Protein sim. GBank gll548705[sp]P36949[RRSB_BACSU - D-RIBOSE-BINDING PROTEIN PRECURSOR	UNCLASSIFIED	264764
468	52562208 (935, 936)	Novel Protein sim. GBank gll2114024[emb]CAB08957] - (Z95558) grcC1 [Mycobacterium tuberculosis]	UNCLASSIFIED	264692
469	19520527 (937, 938)	Novel Protein sim. GBank gll2909459[emb]CAA17347] - (AL021929) cobQ [Mycobacterium tuberculosis]	UNCLASSIFIED	264488
470	80502756 (939, 940)	Novel Protein sim. GBank gll114921[sp]P17447[BETT_ECOLI - HIGH-AFFINITY CHOLINE TRANSPORT PROTEIN	synthase	264602, 264769
471	17937351 (941, 942)	Novel Protein sim. GBank gll114921[sp]P17447[BETT_ECOLI - HIGH-AFFINITY CHOLINE TRANSPORT PROTEIN	transport	265019
472	80047458 (943, 944)	Novel Protein sim. GBank gll862343 (L10908) - Gcap1 gene product [Mus musculus]	UNCLASSIFIED	264598, 264685, 264557
473	20558793 (945, 946)	Novel Protein sim. GBank gll862343 (L10908) - Gcap1 gene product [Mus musculus]	UNCLASSIFIED	264369
474	80593365 (947, 948)	Novel Protein sim. GBank gll5453656[rel]NP_006329.1[pGAC1 - glioma amplified on chromosome 1 protein (leucine-rich)	UNCLASSIFIED	22276997, 264692, 264288
475	82454685 (949, 950)	Novel Protein sim. GBank gll5453656[rel]NP_006329.1[pGAC1 - glioma amplified on chromosome 1 protein (leucine-rich)	UNCLASSIFIED	264907, 264908, 264511, 265009, 264762, 264448, 264636, 264638
476	84143857 (951, 952)	Novel Protein sim. GBank gll5453656[rel]NP_006329.1[pGAC1 - glioma amplified on chromosome 1 protein (leucine-rich)	glycoprotein	65274572, 60432049, 264259, 264508, 52644045, 55812038, 264758, 265011, 264288, 264686, 52644229, 65274791, 264638, 264586
477	79175833 (953, 954)	Novel Protein sim. GBank gll1127551 (U18939) - orf2 [Batrachocottus baikalensis]	UNCLASSIFIED	264638
478	79633483 (955, 956)	Novel Protein sim. GBank gll1127551 (U18939) - orf2 [Batrachocottus baikalensis]	UNCLASSIFIED	264690, 264693
479	80189746 (957, 958)	Novel Protein sim. GBank gll1127551 (U18939) - orf2 [Batrachocottus baikalensis]	collagen	264686, 35695855, 265008, 264631, 264910, 264632, 264638, 265018, 264369, 264909
480	79390729 (959, 960)	Novel Protein sim. GBank gll1127551 (U18939) - orf2 [Batrachocottus baikalensis]	mapolymerase	264369
481	79624578 (961, 962)	Novel Protein sim. GBank gll4063042 (AF068065) - GP900; much-like glycoprotein [Cryptosporidium parvum]	UNCLASSIFIED	264693
482	83050611 (963, 964)	Novel Protein sim. GBank gll4063042 (AF068065) - GP900; much-like glycoprotein [Cryptosporidium parvum]	UNCLASSIFIED	264909, 264686, 264768, 264693, 55811576, 56182323, 18108385

483	20293306 (965, 966)	Novel Protein sim. GBank gij2104303[emb]CAB08632] - (Z95387) hypothetical protein Rv2610c [Mycobacterium tuberculosis]	Contains protein domain (PF00534) - Glycosyl transferases group 1	264600	
484	11618046 (967, 968)	Novel Protein sim. GBank gij3450883 (AF083334) - fibroin [Antheraea pernyi]	UNCLASSIFIED	264594	
485	80191234 (969, 970)	Novel Protein sim. GBank gij5042272[emb]CAB44526.1] - (AL078618) nuoF, NADH dehydrogenase subunit [Sireptomyces coelicolor]	UNCLASSIFIED	264369, 21908785, 22278000, 22279002	
486	80058042 (971, 972)		dehydrogenase	264604	
487	11813339 (973, 974)			264638	
488	91222383 (975, 976)	Novel Protein sim. GBank gij5724778[gb]AAC53522.2] - (AF012273) rho-type GTPase-activating protein rhoGAPX-1 [Mus musculus]	Contains protein domain (PF00620) - RhoGAP domain	264686, 66714117, 264768, 18108385, 55811576, 265006, 265008, 265009, 265019, 22278002, 264259, 18108370, 264907, 264784, 56182323, 264288, 264693	
489	10867710 (977, 978)	Novel Protein sim. GBank gij388223[dbj]BAA34471.1] - (AB018294) KIAA0751 protein [Homo sapiens]	kinase	264639	
490	95361124 (979, 980)	Novel Protein sim. GBank gij82091[pir]A25494 - hydroxyproline-rich glycoprotein - tomato (fragment)	collagen	22278996, 29331822, 29331828, 264107, 264909, 264110, 265009, 264592, 264593, 60433356, 264288, 264693, 263974, 263976, 20281071, 60432113	
491	80496412 (981, 982)	Novel Protein sim. GBank gij2894208[emb]CAA17072] - (AL021840) hypothetical protein Rv3258c [Mycobacterium tuberculosis]	UNCLASSIFIED	264769	
492	87421264 (983, 984)			264600	
493	11692942 (985, 986)		UNCLASSIFIED	264638	
494	87726604 (987, 988)	Novel Protein sim. GBank gij5262603[emb]CAB45743.1] - (AL080150) hypothetical protein [Homo sapiens]	UNCLASSIFIED	264489, 35696286, 60432289, 29331828, 35696052, 264509, 264905, 264906, 264907, 264908, 264909, 264510, 264511, 265009, 264910, 33657402, 284762, 264764, 264768, 264769, 264688, 21906765, 21906769, 35695917, 265020, 264693, 33657109, 264629, 35696423, 35695855, 264634, 264638	
495	80028599 (989, 990)	Novel Protein sim. GBank gij2791517[emb]CAA16054] - (AL021246) hypothetical protein Rv2477c [Mycobacterium tuberculosis]	Contains protein domain (PF00005) - ABC transporter	264602, 264682, 264638	
496	7695624 (991, 992)	Novel Protein sim. GBank gij230281[dbj]R69] - 434 Repressor (Amino-Terminal Domain) (R1-69)	Contains protein domain (PF01381) - Helix-turn-helix	264601, 265021	
497	76948661 (993, 994)	Novel Protein sim. GBank gij129736[sp]P28225[PDXH_ECOLI - PYRIDOXAMINE 5'-PHOSPHATE OXIDASE (PNP/PMP OXIDASE)]	oxidase	265006	

498	88095488 (895, 896)	Novel Protein sim. GBank gii1145789 (U41662) - neurologin 2 [Rattus norvegicus]	Contains protein domain (PF00135) - Carboxylesterases	esterase	264259, 28331826, 35696052, 264508, 264509, 264905, 264908, 264907, 264908, 264909, 264510, 264511, 265009, 264910, 264591, 33657402, 264758, 265010, 265011, 264600, 264601, 264605, 264683, 264764, 264766, 264767, 264768, 264687, 264769, 2106767, 33657023, 264693, 264628, 264629, 35696423, 264630, 264632, 264634, 264635, 264637, 264638, 264558, 264639, 18108385, 264563, 264564, 264565, 264566, 264567
499	20438222 (987, 998)	Novel Protein sim. GBank gii97480[pri]S19739 - Integral membrane protein - Rhodobacter capsulatus		UNCLASSIFIED	264605
500	11076810 (999, 1000)	Novel Protein sim. GBank gii5708250[emb]CAB52363.1 - (AL109747) putative integral membrane protein		UNCLASSIFIED	264688
501	13418034 (1001, 1002)	Streptomyces coelicolor A3(2)			
502	80021176 (1003, 1004)	Novel Protein sim. GBank gii4468678[emb]CAB38132.1 - (AL035591) glucose-6-phosphate isomerase [Streptomyces coelicolor]	Contains protein domain (PF00342) - Phosphoglucose isomerase	isomerase	22278996, 265011, 264602, 264605, 264635
503	20264483 (1005, 1006)			UNCLASSIFIED	264564
504	10887321 (1007, 1008)			UNCLASSIFIED	264687
505	95003068 (1009, 1010)			UNCLASSIFIED	264369
506	16454282 (1011, 1012)	Novel Protein sim. GBank gii4033509[sp]P02598[CALM_TETPY - CALMODULIN	Contains protein domain (PF00036) - EF hand	struct	265010
507	20451598 (1013, 1014)	Novel Protein sim. GBank gii2501069[sp]Q46127[SYW_CLOLO - TRYPTOPHANYL-TRNA SYNTHETASE (TRYPTOPHAN--TRNA LIGASE) (TRPRS)		UNCLASSIFIED	264604
508	78841424 (1015, 1016)	Novel Protein sim. GBank gii466068[sp]P34618[YO82_CAEEL - HYPOTHETICAL 33.8 KD PROTEIN ZK1236.2 IN CHROMOSOME III		UNCLASSIFIED	264908
509	11776388 (1017, 1018)				264638
510	83373485 (1019, 1020)			UNCLASSIFIED	264687, 264639
511	16525578 (1021, 1022)				265007
512	20399484 (1023, 1024)	Novel Protein sim. GBank gii2497419[sp]P56351[Y4RB_RHISN - PUTATIVE INTEGRASE/RECOMBINASE Y4RB		UNCLASSIFIED	264565
513	78457404 (1025, 1026)	Novel Protein sim. GBank gii1276897 (U41809) - cyclin J [Drosophila melanogaster]	Contains protein domain (PF00134) - Cyclin	cyclin	264683, 264689, 35696423, 264639
514	78813805 (1027, 1028)	Novel Protein sim. GBank gii1184790 (U46068) - von Ebner minor salivary gland protein [Mus musculus]		UNCLASSIFIED	29331830, 264909
515	79462591 (1029, 1030)	Novel Protein sim. GBank gii2127400[pri]S65770 - maltotrioglycosyltrehalose trehalohydrolase - Arthrobacter sp. (strain Q36)		amylase	22278999, 264690
516	9862020 (1031, 1032)				264910

517	95292994 (1033, 1034)	Novel Protein sim. GBank gij2983605 (AE000725) - ribose 5 phosphate isomerase B [Aquilifex aeolicus]		isomerase	265018, 264605, 264764, 264766, 264687, 264691, 264565
518	8491831 (1035, 1036)	Novel Protein sim. GBank gij854085[emb]CAX58337] - (X83413) U88 [Human herpesvirus 6]		UNCLASSIFIED	264487
519	91677886 (1037, 1038)	Novel Protein sim. GBank gij5689365[dbj]BAA83073.1] - (AB024075) B120 [Homo sapiens]	Contains protein domain (PF01388) - ARID DNA binding domain	dna_rna_bind	52644507, 22278997, 22278998, 60432049, 264259, 52845080, 29331824, 66714117, 60424269, 29331826, 35696052, 264905, 29331830, 66712502, 264511, 265007, 264591, 60432229, 33657402, 60433438, 21908754, 33109954, 52644296, 87168474, 87168559, 265017, 265018, 284604, 285019, 264681, 264448, 264369, 264288, 264685, 21908765, 21908766, 21908767, 21908769, 265021, 60170615, 33657023, 264692, 52845129, 33657109, 27486262, 27486264, 35695763, 18108370, 264629, 52844332, 56182323, 264639, 83373044, 18108385, 56526486, 60432113
520	79869188 (1039, 1040)	Novel Protein sim. GBank		transport	264769
521	11076821 (1041, 1042)	gij1169128[sp]P46839[CTPA_MYCLE - CATION-TRANSPORTING P-TYPE ATPASE A			264605
522	80435060 (1043, 1044)	Novel Protein sim. GBank	Contains protein domain (PF00294) - pfkB family carbohydrate kinase	kinase	264905, 264768
523	18356013 (1045, 1046)	gij1172869[sp]P44331[RESK_HAEIN - RIBOKINASE Novel Protein sim. GBank gij2132243[pir]S61028 - hypothetical protein YPL236c - yeast (Saccharomyces cerevisiae)		UNCLASSIFIED	264629
524	80261805 (1047, 1048)	Novel Protein sim. GBank gij4033608[dbj]BAA35136] - (AB012308) B2HC [Anthracodaris crassispina]		ATPase_associated	264092, 264598, 265011
525	79610046 (1049, 1050)	Novel Protein sim. GBank gij4106610[emb]CAA21365] - (AL031866) ORF42, len=386 aa, similarity to an aminotransferase, in P95957 Sulfolobus solfataricus, (401 aa), 33.1% identity in 393 aa overlap. FastA scores: opt:468, E(): 8.5e-24, in Q64602 R. norvegicus, (425 aa), 28.6% ident...		UNCLASSIFIED	264907
526	36827630 (1051, 1052)	Novel Protein sim. GBank gij31088[sp]P24215[UJXUA_ECOLI - MANNONATE DEHYDRATASE (D-MANNONATE HYDROLASE)		UNCLASSIFIED	264758
527	80504729 (1053, 1054)	Novel Protein sim. GBank		UNCLASSIFIED	264769
528	65484134 (1055, 1056)	gij731088[sp]P24215[UJXUA_ECOLI - MANNONATE DEHYDRATASE (D-MANNONATE HYDROLASE)		UNCLASSIFIED	56182575, 265017, 265018
529	17936610 (1057, 1058)	Novel Protein sim. GBank gij42144[emb]CAA25200] - (X00513) NusA protein (nusA) [Escherichia coli]		hydrolase	265019
530	10887336 (1059, 1060)	Novel Protein sim. GBank gij5262640[emb]CAB45758.1] - (AL080170) hypothetical protein [Homo sapiens]	Contains protein domain (PF00622) - SPRY domain	UNCLASSIFIED	264687
531	80226578 (1061, 1062)	Novel Protein sim. GBank gij5262640[emb]CAB45758.1] - (AL080170) hypothetical protein [Homo sapiens]		UNCLASSIFIED	264555, 264556, 264557, 264558, 18108385
532	90933444 (1063, 1064)	Novel Protein sim. GBank gij5262640[emb]CAB45758.1] - (AL080170) hypothetical protein [Homo sapiens]		UNCLASSIFIED	264488, 264489, 264490, 264259, 264592, 264780, 265021, 264690, 263976, 264559

533	87761531 (1085, 1086)	Novel Protein sim. GBank gi 4883636 gb AAD31593.1 AF11229 integral inner nuclear membrane protein MAN1 [Homo sapiens]			264907, 264909, 264768, 35695917, 264630, 264555
534	82368264 (1087, 1088)	Novel Protein sim. GBank gi 29955252 emb CAA04606.1 - (AJ001206) pep1 [Streptomyces coelicolor]	UNCLASSIFIED		264905, 265011, 264601, 264602, 264605,
535	79641850 (1089, 1070)	Novel Protein sim. GBank gi 3878636 emb CAA68953 - (Z49126) similar to cAMP-dependent protein kinase; cDNA EST EMBL: T00719 comes from this gene; cDNA EST yk465d8.3 comes from this gene; cDNA EST yk465d8.5 comes from this gene; cDNA EST yk492f4.3 comes from this gene; cDNA EST y...	Contains protein domain (PF00069) - ATPase-associated Eukaryotic protein kinase domain		264762, 264768, 285020, 264893, 264836 264806
538	78907207 (1071, 1072)	Novel Protein sim. GBank gi 2495628 sp P55757 YOH1_SERMA - HYPOTHETICAL 10.1 KD PROTEIN IN BIOA 5 REGION	reductase		18108376, 264805, 264806, 264807, 264809
537	94147448 (1073, 1074)				265008, 264605, 65274781
538	87821863 (1075, 1076)	Novel Protein sim. GBank gi 134920 sp P21987 SSGP_VOLCA - SULFATED SURFACE GLYCOPROTEIN 185 (SSG 185)	collagen		29331822, 29331824, 29331825, 29331826, 29331827, 264808, 52644045, 33657402, 265017, 264762, 264683, 264288, 264685, 21908765, 35895763, 264558, 60170394, 264559, 22279002
539	28396268 (1077, 1078)	Novel Protein sim. GBank gi 2498433 sp Q12341 HAT1_YEAST - HISTONE ACETYLTRANSFERASE	histone		264602, 265019
540	79637077 (1079, 1080)				264893
541	87762268 (1081, 1082)	Novel Protein sim. GBank gi 3882241 db BAA34480.1 - (AB018303) KIAA0760 protein [Homo sapiens]	transcript factor		18108394, 22278997, 22278998, 264259, 264112, 265009, 33657402, 55812038, 52646317, 265017, 21908765, 264693, 55811576, 264635, 56526486, 264566
542	85285836 (1083, 1084)	Novel Protein sim. GBank gi 5042272 emb CAB44526.1 - (AL078618) nuoF, NADH dehydrogenase subunit [Streptomyces coelicolor]	dehydrogenase		264910, 265018, 264689, 264638, 264486
543	7976280 (1085, 1086)				
544	20437191 (1087, 1088)	Novel Protein sim. GBank gi 2791398 emb CAA15984 - (AL021184) hypothetical protein Rv1464 [Mycobacterium tuberculosis]	UNCLASSIFIED		264602, 264908
545	80434504 (1089, 1090)		UNCLASSIFIED		264605
546	80249016 (1091, 1092)	Novel Protein sim. GBank gi 4887211 gb AAD32237.1 AF14744 - (AF147449) penicillin binding protein 1B [Pseudomonas aeruginosa]			264768, 264634, 264907, 264592, 264909 264600, 264602, 21908765
547	11077563 (1093, 1084)	Novel Protein sim. GBank gi 1350855 sp P19176 RPOC_PSEPU - DNA-DIRECTED RNA POLYMERASE BETA' CHAIN (TRANSCRIPTASE BETA' CHAIN) (RNA POLYMERASE BETA' SUBUNIT) Novel Protein sim. GBank gi 2330021 (AF019250) - Kinesin- related protein; KRP; Costal2 [Drosophila melanogaster]	mapolymerase		264604
548	82114936 (1095, 1096)		UNCLASSIFIED		264488, 264905, 264910, 264760, 264693, 264639, 264583, 264564

549	95421904 (1097, 1098)	Novel Protein sim. GBank gijM337460jgb AAD18133 - (AF056195) neuroblastoma-amplified protein [Homo sapiens]		UNCLASSIFIED	264488, 65274572, 18108398, 22278995, 22278996, 22278997, 22278998, 22278999, 264259, 29331824, 66714117, 29331825, 29331826, 35696052, 265007, 265008, 264910, 264592, 33657402, 33109954, 265017, 265018, 265019, 18108351, 264448, 264764, 264369, 264288, 264766, 264686, 264688, 21906765, 21906766, 21906767, 21906768, 21906769, 265020, 264691, 33657023, 264692, 264693, 65274620, 52845129, 33657109, 27486261, 27486262, 27486264, 33657349, 55811576, 18108387, 60432113, 22279002
550	10866616 (1099, 1100)	Novel Protein sim. GBank		UNCLASSIFIED	264688
551	80439990 (1101, 1102)	Novel Protein sim. GBank gij3122893jpiP94985jSYFB_MYCTU - PHENYLALANYL-TRNA SYNTHETASE BETA CHAIN (PHENYLALANINE--TRNA LIGASE BETA CHAIN) (PHERS)		UNCLASSIFIED	264908, 264909, 264768
552	94672870 (1103, 1104)	Novel Protein sim. GBank gij552087 (M33763) - crumbs protein [Drosophila melanogaster]	Contains protein domain (PF000008) - EGF-like domain	UNCLASSIFIED	264689, 264639, 264563
553	80106002 (1105, 1106)	Novel Protein sim. GBank gij5019771jgb AAD37857.1 AF13326 - (AF133263) histidine protein kinase-response regulator hybrid protein CvgSY [Pseudomonas syringae pv. syringae]		kinase	55811957, 264628
554	78618378 (1107, 1108)	Novel Protein sim. GBank gij131515jpiP02908IPTGA_SALTY - PTS SYSTEM, GLUCOSE-SPECIFIC IIA COMPONENT (EIIA-GLC) (GLUCOSE-PERMEASE IIA COMPONENT) (PHOSPHOTRANSFERASE ENZYME II, A COMPONENT) (EIIB-GLC)	Contains protein domain (PF00358) - phosphoenolpyruvate-dependent sugar phosphotransferase system, EIIA 1	transport	264762
555	78996347 (1109, 1110)	Novel Protein sim. GBank gij3914014jpiP96380jMFD_MYCTU - TRANSCRIPTION-REPAIR COUPLING FACTOR (TRCF)		transcriptfactor	264508, 264605, 264559
556	20457127 (1111, 1112)	Novel Protein sim. GBank gij5042273jemb CAB44527.1 - (AL078618) nucE, NADH dehydrogenase subunit [Streptomyces coelicolor]		dehydrogenase	264488
557	19523405 (1113, 1114)	Novel Protein sim. GBank gij1170933jpiP45331 METE_HAEIN - 5-METHYL TETRAHYDROPTEROYL TRIGLUTAMATE--HOMOCYSTEINE METHYLTRANSFERASE (METHIONINE SYNTHASE, VITAMIN-B12 INDEPENDENT ISOZYME) (COBALAMIN-INDEPENDENT METHIONINE SYNTHASE)		UNCLASSIFIED	264602
558	20724429 (1115, 1116)	Novel Protein sim. GBank gij4980567jgb AAD35173.1 AE001694 iron(III) ABC transporter, permease protein [Thermotoga maritima]		UNCLASSIFIED	264634

560	80066533 (1119, 1120)	Novel Protein sim. GBank gij2492595jsp Q53183 Y4TR_RHISN - PROBABLE PEPTIDE ABC TRANSPORTER ATP-BINDING PROTEIN Y4TR	Contains protein domain (PF000005) - ABC transporter	transport	18108396, 264906, 264602, 264604, 18108374
561	20293187 (1121, 1122)			UNCLASSIFIED	264600
562	11698161 (1123, 1124)			UNCLASSIFIED	264689
563	79761420 (1125, 1126)	Novel Protein sim. GBank gij4104925 (AF042276) - poly(hydroxyvalcanoate) granule associated protein GA2 [Pseudomonas putida]		UNCLASSIFIED	264910, 264691
564	56716390 (1127, 1128)	Novel Protein sim. GBank gij2792310 (AF040570) - unknown [Amycolatopsis mediterranei]		dehydrogenase	264592
565	56465618 (1129, 1130)	Novel Protein sim. GBank gij3449294 dbj BAA324621 - (AB011532) MEGF6 [Rattus norvegicus]	Contains protein domain (PF000008) - EGF-like domain	synthase	265010
566	94323888 (1131, 1132)	Novel Protein sim. GBank gij4539568 emb CAB38487.1 - (AL035636) putative helicase [Streptomyces coelicolor]		helicase	264909, 264510, 265008, 264910, 264758, 264600, 264602, 264604, 264605, 264768, 264687, 264689, 35695917, 264693, 65274620, 264486
567	79500955 (1133, 1134)			UNCLASSIFIED	264681, 264691, 264593
568	94681793 (1135, 1136)	Novel Protein sim. GBank gij100506 pir S17455 - Malate dehydrogenase (oxaloacetate-decarboxylating) (NADP+) (EC 1.1.1.40) - Flaveria trinervia (fragment)	Contains protein domain (PF00390) - Malic enzyme	dehydrogenase	264689
569	39506897 (1137, 1138)	Novel Protein sim. GBank gij3915643 sp O31212 RS2_STRCO - 30S RIBOSOMAL PROTEIN S2	Contains protein domain (PF00318) - Ribosomal protein S2	ribosomal prot	264565
570	78375927 (1139, 1140)			UNCLASSIFIED	18108376, 18108387, 264565
571	79763961 (1141, 1142)	Novel Protein sim. GBank gij115122 sp P21627 BRAD_PSEAE - HIGH-AFFINITY BRANCHED-CHAIN AMINO ACID TRANSPORT PROTEIN BRAD		transport	264907, 264908
572	36996838 (1143, 1144)			UNCLASSIFIED	264762
573	20715521 (1145, 1146)	Novel Protein sim. GBank gij4539223 emb CAB39881.1 - (AL049497) putative integral membrane protein [Streptomyces coelicolor]		UNCLASSIFIED	265007, 264601
574	13521592 (1147, 1148)				264636
575	13076416 (1149, 1150)	Novel Protein sim. GBank gij118794 sp P10443 DP3A_ECOLI - DNA POLYMERASE III, ALPHA CHAIN		polymerase	264687
576	20482246 (1151, 1152)	Novel Protein sim. GBank gij5457625 emb CAB49116.1 - (AJ249283) PAB2227 [Pyrococcus abyssi]			264605
577	56727102 (1153, 1154)	Novel Protein sim. GBank gij5042274 emb CAB44528.1 - (AL078618) nuoD, NADH dehydrogenase subunit [Streptomyces coelicolor]	Contains protein domain (PF00346) - Respiratory-chain NADH dehydrogenase, 49 Kd subunit	dehydrogenase	35696032, 264636
578	11804477 (1155, 1156)				264638
579	11764723 (1157, 1158)	Novel Protein sim. GBank gij172308 sp Q11046 MYCTU - HYPOTHETICAL ABC TRANSPORTER ATP-BINDING PROTEIN CY50.09		transport	264682, 264556

580	80059417 (1159, 1160)				22278999, 35696052, 264555, 264556, 264558
581	79230833 (1161, 1162)	Novel Protein sim. GBank gi 3243131 (AF045777) - Iitin [Drosophila melanogaster]	UNCLASSIFIED		265008, 264564
582	80049617 (1163, 1164)	Novel Protein sim. GBank gi 2501162 (sp P77728 YAJR_ECOLI - HYPOTHETICAL 49.0 KD PROTEIN IN ABPA-CYOE INTERGENIC REGION)	Contains protein domain (PF00047) - struct		265021, 264555, 264557
583	79321392 (1165, 1166)	Novel Protein sim. GBank gi 2501162 (sp P77728 YAJR_ECOLI - HYPOTHETICAL 49.0 KD PROTEIN IN ABPA-CYOE INTERGENIC REGION)	transport		264594
584	78845024 (1167, 1168)	Novel Protein sim. GBank gi 3882221 (dbj BAA34470.1) - (AB018293) KIAA0750 protein [Homo sapiens]	UNCLASSIFIED		264488, 264906, 264766, 264687, 35696423
585	79581454 (1169, 1170)	Novel Protein sim. GBank gi 4467250 (emb CAB37575) - (AL035569) probable Glu-IRNA Gln amidotransferase subunit [Streptomyces coelicolor]	UNCLASSIFIED		265018, 264684, 21906769
586	38277486 (1171, 1172)	Novel Protein sim. GBank gi 5689519 (dbj BAA83043.1) - (AB029014) KIAA1091 protein [Homo sapiens]	UNCLASSIFIED		264908, 265007
587	80497359 (1173, 1174)	Novel Protein sim. GBank gi 4467250 (emb CAB37575) - (AL035569) probable Glu-IRNA Gln amidotransferase subunit [Streptomyces coelicolor]	hydrolase		264600, 264602, 264605, 264769, 264690, 264557
588	79557239 (1175, 1176)	Novel Protein sim. GBank gi 5689519 (dbj BAA83043.1) - (AB029014) KIAA1091 protein [Homo sapiens]	UNCLASSIFIED		265020, 264692
589	79805828 (1177, 1178)		UNCLASSIFIED		
590	79815629 (1179, 1180)	Novel Protein sim. GBank gi 2143293 (emb CAB09390) - (Z95972) rpoB [Mycobacterium tuberculosis]	UNCLASSIFIED		22278996, 264907, 264909, 264510, 265009, 265010, 264687, 264769, 35695917, 18108376, 264634, 264636, 264638
591	10313540 (1181, 1182)	Novel Protein sim. GBank gi 2143293 (emb CAB09390) - (Z95972) rpoB [Mycobacterium tuberculosis]	UNCLASSIFIED		264906, 264909
592	13889767 (1183, 1184)	Novel Protein sim. GBank gi 4511983 (gb AAAD21543.1) - (AF088896) electrotransfer ubiquinone oxidoreductase [Zymomonas mobilis]	mapolymerase		264691
593	82344698 (1185, 1186)	Novel Protein sim. GBank gi 4511983 (gb AAAD21543.1) - (AF088896) electrotransfer ubiquinone oxidoreductase [Zymomonas mobilis]	MHC		263972
594	20212392 (1187, 1188)	Novel Protein sim. GBank gi 1272368 (U51896) - Uge [Vibrio parahaemolyticus]	dehydrogenase		264511, 264762, 264769, 264486
595	10064064 (1189, 1190)	Novel Protein sim. GBank gi 1272368 (U51896) - Uge [Vibrio parahaemolyticus]	UNCLASSIFIED		264605
596	13085170 (1191, 1192)	Novel Protein sim. GBank gi 131490 (sp P20966 PTFB_ECOLI - PTS SYSTEM, FRUCTOSE-SPECIFIC IIBC COMPONENT (EIIBC-FRU) (FRUCTOSE-PERMEASE IIBC COMPONENT) (PHOSPHOTRANSFERASE ENZYME II. BC COMPONENT) (EII-FRU)			264769
597	80259003 (1193, 1194)		UNCLASSIFIED		264636
598	94140216 (1195, 1196)		UNCLASSIFIED		264592
599	20385137 (1197, 1198)	Novel Protein sim. GBank gi 125328 (sp P04951 KDSB_ECOLI - 3-DEOXY-MANNO-OCTULOSONATE CYTIDYLTRANSFERASE (CMP-KDO SYNTHETASE) (CMP-2-KETO-3-DEOXYOCTULOSONIC ACID SYNTHETASE) (CKS)	UNCLASSIFIED		264758, 55810764, 264555, 264556, 264637, 83373044
600	10357663 (1199, 1200)	Novel Protein sim. GBank gi 2127414 (pir J560064 - hypothetical protein 2 - Corynebacterium glutamicum	UNCLASSIFIED		264603
601	79610404 (1201, 1202)	Novel Protein sim. GBank gi 2127414 (pir J560064 - hypothetical protein 2 - Corynebacterium glutamicum	UNCLASSIFIED		264906, 264510

602	79250602 (1203, 1204)	Novel Protein sim. GBank gij3522861[gb AAC34243.1]- (AC004411) putative pto kinase [Arabidopsis thaliana]	Contains protein domain (PF00069) - Eukaryotic protein kinase domain	kinase	265007
603	11466067 (1205, 1206)			UNCLASSIFIED	264595
604	81675420 (1207, 1208)				264758
605	20436657 (1209, 1210)	Novel Protein sim. GBank gij1175322[sp P44917 Y083_HAEIN - HYPOTHETICAL PROTEIN HI0883]		UNCLASSIFIED	264605
608	80334582 (1211, 1212)	Novel Protein sim. GBank gij5020284[gb AAD38043.1 AF15136 - (AF151363) Cdc42 GTPase-activating protein [Mus musculus]		UNCLASSIFIED	264764
607	95361506 (1213, 1214)	Novel Protein sim. GBank gij188864 (M74027) - mucin [Homo sapiens]		UNCLASSIFIED	264508, 264908, 85658542, 264682, 264687, 264689, 264534, 18108376, 35698423, 264636, 264555, 264638
608	11810888 (1215, 1216)			UNCLASSIFIED	264682
609	80064775 (1217, 1218)	Novel Protein sim. GBank gij2496701[sp P55552 Y4LL_RHISN - HYPOTHETICAL 91.8 KD PROTEIN Y4LL]	Contains protein domain (PF00989) - PAS domain	UNCLASSIFIED	264605
610	79829413 (1218, 1220)				264682
611	37586205 (1221, 1222)				264508, 264905, 264907, 264908, 264909, 264511, 264910, 264758, 264604, 264684, 264766, 264689, 264692, 264628, 264635, 264636, 264637, 264558
612	95287851 (1223, 1224)	Novel Protein sim. GBank gij1877368[emb CAB07118]- (Z92772) recD [Mycobacterium tuberculosis]	Contains protein domain (PF01443) - Viral (Superfamily 1) RNA helicase	nuclease	264600, 264601, 264604, 264769, 264558, 264565
613	7523475 (1225, 1226)			UNCLASSIFIED	264369
614	79969348 (1227, 1228)	Novel Protein sim. GBank gij5114231[gb AAD40238.1 AF13670 - (AF136709) histidine kinase YycG [Staphylococcus aureus]		kinase	18108372, 264563
615	39586998 (1229, 1230)	Novel Protein sim. GBank gij1339950[dbj BAA12741]- (D85230) large subunit of NADH-dependent glutamate synthase [Plectonema boryanum]		synthase	264600, 264602, 264629
616	20465331 (1231, 1232)	Novel Protein sim. GBank gij544387[sp P35673 GALE_ERWAM - UDP-GLUCOSE 4- EPIMERASE (GALACTOWALDENASE) (UDP- GALACTOSE 4-EPIMERASE)]		isomerase	264605
617	81227222 (1233, 1234)	Novel Protein sim. GBank gij2498097[sp Q60769 TNP3_MOUSE - TUMOR NECROSIS FACTOR, ALPHA-INDUCED PROTEIN 3 (PUTATIVE DNA BINDING PROTEIN A20) (ZINC FINGER PROTEIN A20)]	Contains protein domain (PF00641) - Zn-finger in Ran binding protein and others.	Inf	52845156, 21906765, 35698423, 21908768, 21906769, 22278994, 35698286, 22278998, 265020, 265021, 265007, 265008, 264636, 52844150, 33657023, 264692, 264693, 29331822, 29331824, 55812038, 83373044, 56182181, 60424269, 86714117, 29331825, 33657109, 29331826, 33657182, 29331827, 35698052, 29331828, 27486262, 33657349, 56528486, 265018, 265019, 22279002, 264482, 264448, 29331830, 66712502, 264909

618	20632843 (1235, 1236)	Novel Protein sim. GBank gi 5459388 emb CAB50746.1 - (AL096839) putative aminotransferase [Streptomyces coelicolor]		isomerase	264603	
619	91227224 (1237, 1238)					56994075, 28331826, 33656670, 265008, 33657402, 33109954, 87168559, 264448, 18108374, 83373044
620	81183143 (1239, 1240)	Novel Protein sim. GBank gi 464335 sp Q05922 DUS2_MOUSE - DUAL SPECIFICITY PROTEIN PHOSPHATASE 2 (DUAL SPECIFICITY PROTEIN PHOSPHATASE PAC-1)		phosphatase		29148498, 264758, 264369, 29148627
621	80239251 (1241, 1242)			UNCLASSIFIED	264556, 264558, 264639	
622	20456427 (1243, 1244)	Novel Protein sim. GBank gi 2633557 emb CAB13060 - (Z99110) ydf [Bacillus subtilis]		UNCLASSIFIED	264605	
623	10131788 (1245, 1246)	Novel Protein sim. GBank gi 1857710 gb AAB48482 - (U87224) contactin associated protein [Rattus norvegicus]	Contains protein domain (PF00054) - Laminin G domain	laminin	264906	
624	19534127 (1247, 1248)	Novel Protein sim. GBank gi 1705703 sp P52225 CCMF_PSEFL - CYTOCHROME C-TYPE BIOGENESIS PROTEIN CYCK		cytochrome	264596	
625	13084618 (1249, 1250)	Novel Protein sim. GBank gi 2894252 emb CAA17114.1 - (AL021841) hypothetical protein Rv3342 [Mycobacterium tuberculosis]		UNCLASSIFIED	264688	
626	88062603 (1251, 1252)	Novel Protein sim. GBank gi 416592 sp P32323 AGA1_YEAST - A-AGGLUTININ ATTACHMENT SUBUNIT PRECURSOR		UNCLASSIFIED	29331822, 264905, 264908, 33657023, 33657109, 264558	
627	80255457 (1253, 1254)	Novel Protein sim. GBank gi 3088418 (AF040944) - P140 [Mus musculus]		UNCLASSIFIED	18108394, 264112, 264593, 265022, 264635	
628	80077086 (1255, 1256)	Novel Protein sim. GBank gi 1711543 sp P50526 SSP1_SCHPO - SERINE/THREONINE-PROTEIN KINASE SSP1	Contains protein domain (PF00069) - Eukaryotic protein kinase domain	kinase	264600	
629	79851602 (1257, 1258)	Novel Protein sim. GBank gi 1143204 (U34305) - ORF2; Method: conceptual translation supplied by author. [Shigella sonnei]		isomerase	264906, 264907	
630	39555156 (1259, 1260)	Novel Protein sim. GBank gi 3236368 (AF064748) - S3-12 [Mus musculus]		UNCLASSIFIED	264490	
631	20598718 (1261, 1262)	Novel Protein sim. GBank gi 140687 sp P11666 YGG8_ECOLI - HYPOTHETICAL 30.9 KD PROTEIN IN SBM-FBA INTERGENIC REGION (ORF 4) (F286)			263978	
632	27843890 (1263, 1264)			UNCLASSIFIED	264906, 264600, 264605, 264769, 264689, 264486	
633	80477772 (1265, 1266)			UNCLASSIFIED	264789	
634	17938806 (1267, 1268)				265019	
635	79574508 (1269, 1270)			UNCLASSIFIED	264689	
636	79910981 (1271, 1272)			UNCLASSIFIED	264596, 264782, 264693	

637	82455796 (1273, 1274)	Novel Protein sim. GBank gij2326739[embjCAB410953] - (Z98268) recN [Mycobacterium tuberculosis]		nuclease	264906, 264907, 264510, 264511, 264601, 264602, 264603, 264604, 264605, 18108351, 264762, 264766, 264687, 264768, 264688, 35695917, 264693, 264634, 264636, 264639, 264559, 18108385
638	14997457 (1275, 1276)	Novel Protein sim. GBank gij4678662[embjCAB41074.1] - (AL049645) putative large ATP-binding protein [Streptomyces coelicolor]			264636
639	80204210 (1277, 1278)	Novel Protein sim. GBank gij4589628[dbjBAA76836.1] - (AB023209) KIAA0992 protein [Homo sapiens]		struct	264112, 263974
640	17929579 (1279, 1280)	Novel Protein sim. GBank gij1432083 (U60981) - homolog to Skp1p, an evolutionarily conserved kinetochore protein in budding yeast [Arabidopsis thaliana]	Contains protein domain (PF01466) - Skp1 family	(n)apolymerase	265008, 265010
641	79636398 (1281, 1282)			UNCLASSIFIED	264693
642	19898737 (1283, 1284)			UNCLASSIFIED	264565
643	81516220 (1285, 1286)			UNCLASSIFIED	264906, 264908, 264758, 264288, 264632, 264635, 264639, 264564
644	11751367 (1287, 1288)			UNCLASSIFIED	264684
645	95010907 (1289, 1290)			UNCLASSIFIED	264906, 264762, 264693, 264639, 264559
646	80069083 (1291, 1292)				264595, 264566
647	80257085 (1293, 1294)	Novel Protein sim. GBank gij4507613[refJNP_003738.1]pTNKS - TANKYRASE	Contains protein domain (PF00023) - Ank repeat	transcriptfactor	264909, 264591
648	60077428 (1295, 1296)	Novel Protein sim. GBank gij1044963[pps169646 - protamine [Monodonella turbinata, gonads, Peptide, 106 aa]		UNCLASSIFIED	264600
649	80247447 (1297, 1298)			UNCLASSIFIED	263978
650	11798316 (1299, 1300)			UNCLASSIFIED	264686
651	11776932 (1301, 1302)	Novel Protein sim. GBank gij1346916[spP12283]PURA_ECOLI - ADENYLOSUCCINATE SYNTHETASE (IMP--ASPARTATE LIGASE)			264602, 264638
652	85516704 (1303, 1304)	Novel Protein sim. GBank gij1722977[spQ10638]Y03C_MYCTU - HYPOTHETICAL 82.8 KD PROTEIN CY130.12C		UNCLASSIFIED	264905, 264907, 264909, 263978, 264637
653	82124947 (1305, 1306)			UNCLASSIFIED	22278996, 264510, 264511, 264512, 264593, 21906754, 264603, 264760, 18108376, 264556
654	95010589 (1307, 1308)	Novel Protein sim. GBank gij130327[spP26647]PLSC_ECOLI - 1-ACYL-SN-GLYCEROL-3-PHOSPHATE ACYLTRANSFERASE (1-AGP ACYLTRANSFERASE) (1-AGPAT) (LYSOPHOSPHATIDIC ACID ACYLTRANSFERASE) (LPAAT)	Contains protein domain (PF01553) - Acyltransferase	UNCLASSIFIED	264906, 264595, 264632
655	79320692 (1309, 1310)			transferase	264592
656	80416739 (1311, 1312)			UNCLASSIFIED	264602, 264605, 264766, 264691
657	20611010 (1313, 1314)			UNCLASSIFIED	264557, 264558

658	87761915 (1315, 1316)	Novel Protein sim. GBank gi 5689493 dbj BAA83030.1 - (ABD29001) KIAA1078 protein (Homo sapiens)	UNCLASSIFIED	22278996, 60432049, 29331822, 29331824, 29331828, 265007, 265009, 33657402, 33657084, 285017, 264448, 21908765, 21906766, 263967, 20281149, 18108370, 18108374, 264482
659	87718663 (1317, 1318)	Novel Protein sim. GBank gi 2137872 pir I4724 - zinc finger protein PZF - mouse	transcriptfactor	22278999, 60432049, 66714117, 29331827, 265007, 264766, 56181562, 18108359, 18108365, 18108370, 18108381
660	81897922 (1319, 1320)	Novel Protein sim. GBank gi 134180 sp P15401 ISAC - LEVANSUCRASE AND SUCRASE SYNTHESIS OPERON ANTITERMINATOR	UNCLASSIFIED	264757
661	80028023 (1321, 1322)	Novel Protein sim. GBank gi 4545229 gb AAD22450.1 AF11618 - (AF116183) SecA homolog [Actinobacillus actinomycetemcomitans]	UNCLASSIFIED	264510, 265009, 264600, 264602, 264603, 264604, 264605, 32833986, 18108376, 264636, 18108387, 22279000
662	20463731 (1323, 1324)	Novel Protein sim. GBank gi 1652848 dbj BAA17766 - (D90909) DNA photolyase [Synecocystis sp.]	UNCLASSIFIED	264605
663	20628080 (1325, 1326)	Novel Protein sim. GBank gi 5689250 dbj BAA82881.1 - (AB024335) similar to orf5 [Comamonas testostieroni]	dehydrogenase	264605
664	80508512 (1327, 1328)	Novel Protein sim. GBank gi 1652848 dbj BAA17766 - (D90909) DNA photolyase [Synecocystis sp.]	UNCLASSIFIED	264769
665	80079053 (1329, 1330)	Novel Protein sim. GBank gi 116841 sp P21640 COB - PRECORRIN-3B C17 METHYLTRANSFERASE (PRECORRIN-3 METHYLTRANSFERASE)	isomerase	264600
666	78603142 (1331, 1332)	Novel Protein sim. GBank gi 3261829 emb CAB10927 - (Z98260) hypothetical protein Rv1230c [Mycobacterium tuberculosis]	glycoprotein	264907, 265007
667	94631802 (1333, 1334)	Novel Protein sim. GBank gi 5688851 dbj BAA82702.1 - (AB017438) Orf5 [Streptomyces coelicolor]	UNCLASSIFIED	264689, 264602, 264593
668	82051891 (1335, 1336)	Novel Protein sim. GBank gi 3581853 emb CAA20809 - (AL031541) 50S ribosomal protein L20 [Streptomyces coelicolor]	ribosomalprot	264905, 264906, 264908, 264908, 264600, 264601, 264603, 264605, 264760, 264689, 264636, 264638, 264639
669	12867154 (1337, 1338)	Novel Protein sim. GBank gi 2582531 (AF026444) - 2- isopropylmalate synthase [Streptomyces coelicolor]	UNCLASSIFIED	264637
670	80238549 (1339, 1340)	Novel Protein sim. GBank gi 2114430 (U92703) - Oit-1/EBF-like-3 transcription factor [Mus musculus]	synthase	264905, 264906, 264908, 264601, 264762, 264766, 264689, 264638, 18108385, 264486
671	78601368 (1341, 1342)	Novel Protein sim. GBank gi 4589285 gb AAD26430.1 AF13515 - (AF135154) ferric alkaligin siderophore receptor [Bordetella pertussis]	UNCLASSIFIED	264690, 264692, 264693, 264636, 18108387
672	78834371 (1343, 1344)	Novel Protein sim. GBank gi 2114430 (U92703) - Oit-1/EBF-like-3 transcription factor [Mus musculus]	transcriptfactor	264910, 265017
673	82285788 (1345, 1346)	Novel Protein sim. GBank gi 4589285 gb AAD26430.1 AF13515 - (AF135154) ferric alkaligin siderophore receptor [Bordetella pertussis]		264759
674	78199259 (1347, 1348)	Novel Protein sim. GBank gi 2114430 (U92703) - Oit-1/EBF-like-3 transcription factor [Mus musculus]	UNCLASSIFIED	264629

675	87895870 (1348, 1350)	Novel Protein sim. GBank gi 4980755 gb AAD35347.1 AE00170 - (AE001708) D- alanine--D-alanine ligase [Thermotoga maritima]	Contains protein domain (PF01820) - D-ala D-ala ligase	UNCLASSIFIED	264488, 22278998, 66714117, 264508, 264511, 265008, 60433438, 264600, 264601, 264602, 264603, 264604, 264605, 264762, 264687, 264769, 60431602, 18108374, 264636, 264638 265010
676	78899607 (1351, 1352)	Novel Protein sim. GBank gi 1723566 sp Q10479 YDF7_SCHPO - PUTATIVE GLUCOSYLTRANSFERASE C17C9.07			
677	21644312 (1353, 1354)	Novel Protein sim. GBank gi 687208 (U03976) - dynein heavy chain isotype 5C [Tritoneustes gratilla]		ATPase-associated	264591, 264632
678	84225200 (1355, 1356)	Novel Protein sim. GBank gi 1586274 pr 12203365A - laminin alpha5 [Mus musculus]	Contains protein domain (PF00053) - Laminin EGF-like (Domains III and V)	laminin	264758, 264682, 264557
679	78868855 (1357, 1358)	Novel Protein sim. GBank gi 3928723 emb CAA22219 - (AL034355) putative ABC transporter [Streptomyces coelicolor]		UNCLASSIFIED	22278996, 264693
680	20726424 (1359, 1360)				264600, 264602
681	94322017 (1361, 1362)	Novel Protein sim. GBank gi 5174493 ref NP_006050.1 PLAMC - laminin, gamma 3	Contains protein domain (PF00053) - Laminin EGF-like (Domains III and V)	laminin	264102, 264907, 264908, 265006, 264693, 263972, 83373044, 264566
682	11392478 (1363, 1364)	Novel Protein sim. GBank		UNCLASSIFIED	264595
683	80083680 (1365, 1366)	gi 4758208 ref NP_004081.1 pDUSP - dual specificity phosphatase 3 (vaccinia virus phosphatase VH1-related)	Contains protein domain (PF00782) - Dual specificity phosphatase, catalytic domain	phosphatase	264634
684	20465367 (1367, 1368)	Novel Protein sim. GBank gi 5420387 emb CAB46679.1 - (AJ243459) proteophosphoglycan [Leishmania major]			264605
685	80246735 (1369, 1370)				264909, 263967, 263981
686	79208808 (1371, 1372)				264631
687	80085629 (1373, 1374)				264693, 264635
688	78853412 (1375, 1376)	Novel Protein sim. GBank gi 2688962 (AF027768) - Lspa [Serratia marcescens]		peptidase	264907, 264638
689	80064256 (1377, 1378)	Novel Protein sim. GBank gi 3046931 (AF049330) - PPAR gamma coactivator [Mus musculus]	Contains protein domain (PF00076) - RNA recognition motif. (a.k.a. RRM, RBD, or RNP domain)	UNCLASSIFIED	264908, 264907, 265007, 265009, 60433438, 21908754, 264760, 18108358, 21908766, 21908769, 265021, 18108361, 263974, 18108379, 264557, 18108385, 22279002
690	80389750 (1379, 1380)	Novel Protein sim. GBank gi 2488941 sp Q15428 SP62_HUMAN - SPLICEOSOME ASSOCIATED PROTEIN 62 (SAP 62) (SF3A66)		UNCLASSIFIED	264510, 264511, 264764, 264769
691	81854392 (1381, 1382)			UNCLASSIFIED	264757
692	83608936 (1383, 1384)	Novel Protein sim. GBank gi 5420387 emb CAB46679.1 - (AJ243459) proteophosphoglycan [Leishmania major]	Contains protein domain (PF00097) - Zinc finger, C3HC4 type (RING finger)	UNCLASSIFIED	55812038, 55811957, 265018, 55811150, 18108351, 264908, 60431528, 264594
693	79586116 (1385, 1386)	Novel Protein sim. GBank gi 854065 emb CAA583371 - (X83413) U88 [Human herpesvirus 6]		UNCLASSIFIED	264635
694	82455993 (1387, 1388)	Novel Protein sim. GBank gi 267327 sp Q01033 VG48_HSVSA - HYPOTHETICAL GENE 48 PROTEIN			22278996, 264510, 264602, 264603, 264762, 264687, 264769, 264693

695	94147849 (1389, 1390)	Novel Protein sim. GBank gll4468339[emb CAB38059.1]- (AJ010901) MUC4 [Homo sapiens]	Contains protein domain (PF000094) - von Willebrand factor type D domain	UNCLASSIFIED	56182575, 264509, 264905, 264907, 29331830, 264908, 264909, 264511, 265007, 264910, 264758, 264764, 264288, 65274791 264905, 264595
696	78830882 (1391, 1392)	Novel Protein sim. GBank gll2649850 (AE001058) - glutamine ABC transporter, ATP-binding protein (glnQ) [Archaeoglobus fulgidus]	Contains protein domain (PF00005) - ABC transporter	transport	
697	11767869 (1393, 1394)	Novel Protein sim. GBank gll1731343[sp Q10894 Y25_MYCTU - HYPOTHETICAL 24.4 KD PROTEIN CY49.25	Contains protein domain (PF01836) - Transposase	UNCLASSIFIED	264682
698	66895862 (1395, 1396)			UNCLASSIFIED	264688, 35695917
699	79592558 (1397, 1398)			UNCLASSIFIED	264682
700	78639098 (1399, 1400)				264693
701	80230242 (1401, 1402)	Novel Protein sim. GBank gll1001236[db BAA10477]- (DB4003) hypothetical protein [Synechocystis sp.]		UNCLASSIFIED	264488, 264510, 264511, 264602, 264605, 264689
702	79814789 (1403, 1404)	Novel Protein sim. GBank gll2498935[sp Q46338 ISOXG_CORSP - SARCOSINE OXIDASE GAMMA SUBUNIT		UNCLASSIFIED	264809
703	20446820 (1405, 1406)			oxidase	264604
704	94312224 (1407, 1408)	Novel Protein sim. GBank gll3150513 (AF067219) - contains similarity to the kelch/MIPP family [Caenorhabditis elegans]	Contains protein domain (PF01344) - Kelch motif	UNCLASSIFIED	264288, 56181562, 33657109, 264629, 55811576
705	17832141 (1409, 1410)	Novel Protein sim. GBank gll421091[pir S30730 - hypothetical protein o206 - Escherichia coli		UNCLASSIFIED	265006
706	20288062 (1411, 1412)	Novel Protein sim. GBank gll3024872[sp Q55790 Y074_SYNY3 - HYPOTHETICAL 52.8 KD PROTEIN SLR0074			264600
707	20638065 (1413, 1414)	Novel Protein sim. GBank gll3420608[gb AAC31907.1]- (AF075709) ABC transporter ATP-binding subunit [Pseudomonas putida]		transport	264603
708	20708292 (1415, 1416)	Novel Protein sim. GBank gll3649741[emb CAA03985]- (AJ000281) mucin [Homo sapiens]			264501, 264692
709	88001439 (1417, 1418)	Novel Protein sim. GBank gll3080425[emb CAA18744.1]- (AL022604) putative protein [Arabidopsis thaliana]		struct	18108398, 264637, 264908, 264909
710	11356683 (1419, 1420)	Novel Protein sim. GBank gll4758686[ref NP_002323.1 pLRP1 - low density lipoprotein related protein 1 (alpha-2-macroglobulin receptor)	Contains protein domain (PF00058) - Low-density lipoprotein receptor repeat class B		264369
711	17931418 (1421, 1422)	Novel Protein sim. GBank gll1703266[sp Q11056 AM12_MYCTU - PUTATIVE AMIDASE CY50.19C			265019
712	80258164 (1423, 1424)	Novel Protein sim. GBank gll4502351[ref NP_001692.1 pBAAT - bile acid Coenzyme A: amino acid N-acyltransferase; glycine N- choyltransferase		apolipoprotein	264591
713	78263126 (1425, 1426)	Novel Protein sim. GBank gll1703266[sp Q11056 AM12_MYCTU - PUTATIVE AMIDASE CY50.19C		hydrolase	264906, 264807
714	27847651 (1427, 1428)	Novel Protein sim. GBank gll4502351[ref NP_001692.1 pBAAT - bile acid Coenzyme A: amino acid N-acyltransferase; glycine N- choyltransferase			264508, 264555

715	79639423 (1429, 1430)	Novel Protein sim. GBank gii1789035 (AE000352) - orf, hypothetical protein [Escherichia coli]		UNCLASSIFIED	264907
716	79559072 (1431, 1432)				264692
717	79491842 (1433, 1434)	Novel Protein sim. GBank gii2494074[sp]P5563[IGABD_RHISN - PROBABLE SUCCINATE-SEMIALDEHYDE DEHYDROGENASE (NADP+)] (SSDH)		dehydrogenase	264636
718	94319658 (1435, 1436)	Novel Protein sim. GBank gii3873579[emb]CAA94886] - (Z711178) similar to pro-collagen domains; cDNA EST EMBL:D27978 comes from this gene; cDNA EST EMBL:D27977 comes from this gene; cDNA EST EMBL:D34199 comes from this gene; cDNA EST EMBL:D64392 comes from this gene; cDNA EST EMBL... Novel Protein sim. GBank gii2104302[emb]CA808631] - (Z95387) hypothetical protein Rv2611c [Mycobacterium tuberculosis]	Contains protein domain (PF00093) - von Willebrand factor type C domain	kinase	18108392, 22278994, 22278998, 265008, 265018, 264681, 18108354, 264684, 264685, 264686, 264687, 264689, 21906769, 18108361, 264691, 264692, 55810764, 264635, 18108381, 18108382, 83373044, 18108388
719	17679564 (1437, 1438)			UNCLASSIFIED	265011
720	79841684 (1439, 1440)				264908
721	15020180 (1441, 1442)	Novel Protein sim. GBank gii123530[sp]P04929[HRPX_PLALO - HISTIDINE-RICH GLYCOPROTEIN PRECURSOR		UNCLASSIFIED	264629
722	8862603 (1443, 1444)	Novel Protein sim. GBank gii498253 (U02372) - integrase [Vibrio cholerae]			264910
723	19755599 (1445, 1446)	Novel Protein sim. GBank gii2253054[emb]CAB10705] - (Z97559) hypothetical protein Rv2114 [Mycobacterium tuberculosis]		UNCLASSIFIED	264691
724	10126494 (1447, 1448)	Novel Protein sim. GBank gii4063015 (AF083061) - protease PrtA [Pseudomonas fluorescens]	Contains protein domain (PF00353) - Hemolysin-type calcium-binding proteins	protease	264909
725	78878879 (1449, 1450)			UNCLASSIFIED	264905, 264907
726	13086282 (1451, 1452)			UNCLASSIFIED	264636
727	13522872 (1453, 1454)				264634
728	20266471 (1455, 1456)	Novel Protein sim. GBank gii2633910[emb]CAB13411] - (Z99112) similar to hypothetical proteins [Bacillus subtilis]			264567
729	11293753 (1457, 1458)			UNCLASSIFIED	264490
730	19900373 (1459, 1460)	Novel Protein sim. GBank gii2494880[sp]Q45291[GALE_BRELA - UDP-GLUCOSE 4-EPIMERASE (GALACTOWALDENASE) (UDP-GALACTOSE 4-EPIMERASE)		isomerase	264564
731	80058750 (1461, 1462)	Novel Protein sim. GBank gii1146192 (L47838) - putative [Bacillus subtilis]		UNCLASSIFIED	264605
732	80258175 (1463, 1464)	Novel Protein sim. GBank gii1168396[sp]P46681[AIIP2_YEAST - ACTIN INTERACTING PROTEIN 2		struct	264591, 264594, 264595
733	20446839 (1465, 1466)				
734	20435987 (1467, 1468)	Novel Protein sim. GBank gii3184080[emb]CAA19336] - (AL023781) hypothetical protein [Schizosaccharomyces pombe]		UNCLASSIFIED	264604
				ubiquitin	264604

735	11607959 (1469, 1470)	Novel Protein sim. GBank gi401582 sp P27432 YICE_ECOLI - HYPOTHETICAL 48.9 KD PROTEIN IN GLTS-SELIC INTERGENIC REGION			264594
736	10879734 (1471, 1472)	Novel Protein sim. GBank gi400831 sp P31135 POTH_ECOLI - PUTRESCINE TRANSPORT SYSTEM PERMEASE PROTEIN POTH	Contains protein domain (PF00328) - Binding-protein-dependent transport systems inner membrane component	transport	264636
737	78945340 (1473, 1474)		Contains protein domain (PF00615) - Regulator of G protein signaling domain	UNCLASSIFIED	265020
738	17895353 (1475, 1476)				265008
739	79833670 (1477, 1478)	Novel Protein sim. GBank gi2506867 sp P33225 TORA_ECOLI - TRIMETHYLAMINE- N-OXIDE REDUCTASE PRECURSOR (TMAO REDUCTASE) (TRIMETHYLAMINE OXIDASE)		oxidase	264910
740	19881557 (1479, 1480)				264907, 264764, 264634, 264637
741	79827273 (1481, 1482)	Novel Protein sim. GBank gi3261828 emb CAB10925 - (Z98260) mrp [Mycobacterium tuberculosis]	Contains protein domain (PF01883) - Domain of unknown function	UNCLASSIFIED	264689, 35696286, 264510, 264908, 18108362
742	82393795 (1483, 1484)	Novel Protein sim. GBank gi3877494 emb CAA88472.1 - (Z48583) ATP binding protein with similarity to the CDC48/PAS1/SEC18 family; cDNA EST EMBL:D65037 comes from this gene; cDNA EST EMBL:D68340 comes from this gene; cDNA EST EMBL:D65048 comes from this gene; cDNA EST EMBL:D6845...		UNCLASSIFIED	29331822, 264910, 264762
743	82300051 (1485, 1486)	Novel Protein sim. GBank gi127420 sp P19888 MTBA_BACAR - MODIFICATION METHYLASE BANI (CYTOSINE-SPECIFIC METHYLTRANSFERASE BANI) (M.BANI)	Contains protein domain (PF00145) - C-5 cytosine-specific DNA methylase	UNCLASSIFIED	264488, 264259, 264508, 264905, 264906, 264907, 264908, 264909, 264510, 264511, 264512, 265008, 265009, 264910, 264591, 264596, 264759, 265010, 265011, 18108351, 264763, 264288, 264766, 264768, 264693, 18108370, 264629, 18108372, 264630, 264631, 264634, 264558, 18108385, 264482, 264564, 264567
744	80230421 (1487, 1488)				18109397, 264511, 264690, 264628, 264638, 264692, 264639, 264766
745	9841963 (1489, 1490)	Novel Protein sim. GBank gi78921 pir J504846 - UDP-N- acetyl/muramoylalanine-D-glutamate-2, 6-diaminopimelate--D- alanine-D-alanine ligase (EC 6.3.2.15) precursor -		glycoprotein	264906
746	11073229 (1491, 1492)	Novel Protein sim. GBank gi3386354 (AF074705) - pyochelin synthetase [Pseudomonas aeruginosa]		synthase	264600
747	94322044 (1493, 1494)	Novel Protein sim. GBank gi2887411 dbj BAA24848 - (AB007878) KIAA0418 [Homo sapiens]	Contains protein domain (PF00018) - SH3 domain	oxidase	66714117, 264905, 264509, 264906, 264907, 264908, 264909, 264511, 264910, 265011, 264681, 264288, 264766, 264687, 264768, 264769, 21906768, 35695917, 264691, 264693, 264628, 264634, 264635, 264639, 56182323, 83373044
748	11617923 (1495, 1496)				264690

749	20469119 (1497, 1498)	Novel Protein sim. GBank gi 1169727 sp P44948 FPG_HAEIN - FORMAMIDOPYRIMIDINE-DNA GLYCOSYLASE (FAPY- DNA GLYCOSYLASE)		UNCLASSIFIED	264604 264600
751	21636169 (1501, 1502)	Novel Protein sim. GBank gi 5360088 sp AA042851.1 AF15968 - (AF159689) serine/threonine kinase PKN3 [Myxococcus xanthus]	Contains protein domain (PF00069) - Eukaryotic protein kinase domain	kinase	264605, 264559
752	82450366 (1503, 1504)	Novel Protein sim. GBank gi 1168662 sp P44428 BIOA_HAEIN - ADENOSYLMETHIONINE-8-AMINO-7-OXONONANOATE AMINOTRANSFERASE (7.8-DIAMINO-PELAGONIC ACID AMINOTRANSFERASE) (DAPA AMINOTRANSFERASE)	Contains protein domain (PF00202) - Aminotransferases class-III pyridoxal phosphate	UNCLASSIFIED	264508, 264907, 264510, 265011, 264762, 264689, 35695855, 264638, 18108387
753	80508718 (1505, 1506)	Novel Protein sim. GBank gi 2851530 sp P32399 YHGE_BACSU - HYPOTHETICAL 84.1 KD PROTEIN IN HEMY-GLTT INTERGENIC REGION (ORFB)		UNCLASSIFIED	264908, 264600, 264602, 264604, 264760, 264769, 264634
754	95083741 (1507, 1508)			UNCLASSIFIED	264508, 264906, 264907, 264908, 264909, 264759, 264802, 264764, 264769, 264628, 264629, 264630, 264632, 264634, 264635, 264637, 264638, 83373044, 18108385
755	80185449 (1509, 1510)	Novel Protein sim. GBank gi 3449276 emb CAA20420 - (AL031317) putative dehydrogenase [Streptomyces coelicolor]		UNCLASSIFIED	264448, 264690 264768, 264689, 264638, 264639
756	94631688 (1511, 1512)			UNCLASSIFIED	
757	79465533 (1513, 1514)	Novel Protein sim. GBank gi 456033 emb CAB40107.1 - (AJ001206) putative glycogen debranching enzyme [Streptomyces coelicolor]		UNCLASSIFIED	264682, 264685 265007, 18108387, 265007, 18108387
758	78963176 (1515, 1516)	Novel Protein sim. GBank gi 2911858 (AF047659) - No definition line found [Caenorhabditis elegans]		UNCLASSIFIED	264684, 264686
759	78475667 (1517, 1518)	Novel Protein sim. GBank gi 3451312 emb CAA20449 - (AL031324) membrane alipase [Schizosaccharomyces pombe]	Contains protein domain (PF00122) - E1-E2 ATPase	transport	29331822, 264908, 52644045, 56182435, 60170831, 21906754, 265017, 265019, 264681, 264687, 264688, 21906768, 21906768, 265020, 265021, 265022, 264635, 22279000
760	87628888 (1519, 1520)			UNCLASSIFIED	264766
761	79877966 (1521, 1522)	Novel Protein sim. GBank gi 3327158 db BAA31647 - (AB014572) KIAA0672 protein [Homo sapiens]		UNCLASSIFIED	264907, 264593, 265020
762	80023563 (1523, 1524)	Novel Protein sim. GBank gi 4981266 sp AAD35822.1 AE00174 - (AE001744) lipopolysaccharide core biosynthesis protein KdtB [Thermotoga maritima]		UNCLASSIFIED	264600
763	20284813 (1525, 1526)				
764	39515024 (1527, 1528)				264603

765	80025347 (1529, 1530)	Novel Protein sim. GBank gi 3845093 (AE001371) - erythrocyte membrane protein P1EMP3 [Plasmodium falciparum]		struct	284905, 284906, 284594, 284686, 33657023
766	82417404 (1531, 1532)			UNCLASSIFIED	284605, 284762, 18108374
767	10296742 (1533, 1534)	Novel Protein sim. GBank gi 54112 [pir]S40827 - hypothetical protein o300 - Escherichia coli		UNCLASSIFIED	264907
768	79416080 (1535, 1536)			UNCLASSIFIED	264592, 264595
769	80086554 (1537, 1538)	Novel Protein sim. GBank gi 2982501 [emb]CAA061841 - (AJ004832) neuropathy target esterase [Homo sapiens]		esterase	55810784, 284559
770	80417847 (1539, 1540)	Novel Protein sim. GBank gi 283437 [pir]S27850 - hypothetical protein - Trypanosoma cruzi (fragment)		UNCLASSIFIED	264905, 264907, 284828, 284908, 265010, 284766, 284628, 284629, 284634, 284636, 264555
771	95329508 (1541, 1542)	Novel Protein sim. GBank gi 4769004 [gb]AAD29715.1 [AF14059] - (AF140598) ring-box protein 1 [Homo sapiens]	Contains protein domain (PF00097) - Zinc finger, C3HC4 type (RING finger)	UNCLASSIFIED	56182575, 35686286, 264259, 66714117, 264107, 66712502, 56182435, 284112, 55812038, 87168559, 284288, 21906766, 33657023, 65274620, 65274791, 18108381
772	78971362 (1543, 1544)			UNCLASSIFIED	264910
773	78945383 (1545, 1546)			UNCLASSIFIED	265020
774	78856129 (1547, 1548)	Novel Protein sim. GBank gi 5531324 [emb]CAB51045.1 - (AJ009579) putative alkane 1-monoxygenase [Pseudomonas fluorescens]		UNCLASSIFIED	264909
775	20620141 (1549, 1550)			UNCLASSIFIED	
776	78942693 (1551, 1552)		Contains protein domain (PF01006) - Hepatitis C virus non-structural protein NS4a	UNCLASSIFIED	264555, 265019
777	79960378 (1553, 1554)	Novel Protein sim. GBank gi 4505461 [ref]NP_003624.1 [P1NRPB - nuclear restricted protein, BTB domain-like (brain)]	Contains protein domain (PF01344) - Kelch motif	protease	21906754, 265020, 60170615, 264691
778	20691310 (1555, 1556)			UNCLASSIFIED	264511
779	80054024 (1557, 1558)			UNCLASSIFIED	264603
780	95288987 (1559, 1560)	Novel Protein sim. GBank gi 1144520 (U34956) - phosphoribosylformylglycinamide synthase [Mycobacterium tuberculosis]		synthase	264907, 284600, 284601, 284602, 264603, 284604, 264605, 264486
781	80250049 (1561, 1562)				284905, 264907, 265010, 284600, 284601, 18108362, 18108374, 264556
782	8758529 (1563, 1564)	Novel Protein sim. GBank gi 4155447 (AE001517) - proline/betaine transporter [Helicobacter pylori J99]		UNCLASSIFIED	264605
783	16410791 (1565, 1566)				265020
784	80051197 (1567, 1568)			UNCLASSIFIED	264635, 33657023, 29331828, 265017, 264585, 284568
785	56073541 (1569, 1570)	Novel Protein sim. GBank gi 3451335 (AC005525) - F22162_1 [Homo sapiens]	Contains protein domain (PF00047) - Immunoglobulin domain	struct	35696052, 264604
786	20438842 (1571, 1572)	Novel Protein sim. GBank gi 136748 [sp]P10905 [UGPA_ECOLI - SN-GLYCEROL-3-PHOSPHATE TRANSPORT SYSTEM PERMEASE PROTEIN UGPA]		transport	264603
787	80258364 (1573, 1574)			UNCLASSIFIED	284593

788	80507844 (1575, 1576)	Novel Protein sim. GBank gij2746079 (AF015310) - BTH1 [Brassica napus]		synthase	264909, 264602, 264603, 264769, 264638
789	17294715 (1577, 1578)	Novel Protein sim. GBank gij2351849 (U93357) - 40 kDa heat shock chaperone protein [Halobacterium salinarum]		UNCLASSIFIED	265007
790	86284406 (1579, 1580)	Novel Protein sim. GBank gij5706378 (dbj BAA83099.1) - (AB026118) MALT1 [Homo sapiens]	Contains protein domain (PF00047) - Immunoglobulin domain	glycoprotein	22278999, 29331824, 264828, 87188559, 265018, 21906765, 21906767, 21906768, 21906769, 265020, 264692, 22279000, 264563
791	84651627 (1581, 1582)	Novel Protein sim. GBank gij5689949 (emb CAB51985.1) - (AL109863) putative isoleucyl-tRNA synthetase [Streptomyces coelicolor A3(2)]			264601, 264605, 264636
792	80058786 (1583, 1584)	Novel Protein sim. GBank gij393194 (L02375) - S-antigen [Plasmodium falciparum]		struct	285021, 264631, 264635, 264556
793	79636730 (1585, 1586)	Novel Protein sim. GBank gij1345409 (dbj BAA05046) - (D26046) AT motif-binding factor [Mus musculus]	Contains protein domain (PF00046) - Homeobox domain	homeobox	264693
794	81839284 (1587, 1588)	Novel Protein sim. GBank gij105884 (pir J524023) - dopamine receptor D4 - human (fragment)		UNCLASSIFIED	264603, 264604, 264910, 264762, 264906, 264639, 264909, 264757
795	80074988 (1589, 1590)	Novel Protein sim. GBank gij1877334 (emb CAB07082) - (Z82771) bira [Mycobacterium tuberculosis]		carboxylase	264488, 35696052, 264905, 264907, 265010, 35696423, 264636
796	86669451 (1591, 1592)				80432229, 55811150, 264630, 264637, 264565
797	8771781 (1593, 1594)	Novel Protein sim. GBank gij2995447 (emb CAA71518) - (Y10495) CDV-1R protein [Mus musculus]		struct	22278998, 264093, 264094, 66714117, 21906767, 21906769, 265020, 265022
798	79865209 (1595, 1596)			transcript factor	264687, 264768, 264693
799	79557816 (1597, 1598)	Novel Protein sim. GBank gij4467250 (emb CAB37575) - (AL035569) probable Glu-tRNA Gln amidotransferase subunit [Streptomyces coelicolor]		hydrolase	264909, 264910, 264636, 264638
800	79970189 (1599, 1600)			UNCLASSIFIED	264488
801	80499399 (1601, 1602)	Novel Protein sim. GBank gij2791517 (emb CAA16054) - (AL021246) hypothetical protein Rv2477c [Mycobacterium tuberculosis]		transport	264508, 264511, 265006, 265009, 264769, 264567, 264486
802	79834598 (1603, 1604)	Novel Protein sim. GBank gij4887211 (gb AAD32237.1) (AF14744) - (AF147449) penicillin binding protein 1B [Pseudomonas aeruginosa]			264905, 264693
803	20467520 (1605, 1606)			struct	264605
804	10174239 (1607, 1608)	Novel Protein sim. GBank gij1176152 (sp P44507) (YHAD_HAEIN - HYPOTHETICAL PROTEIN H10091)		kinase	264510
805	79599993 (1609, 1610)				264508
806	80484113 (1611, 1612)	Novel Protein sim. GBank gij2764612 (emb CAA04683) - (AJ001330) ornithine transcarbamoylase [Lactobacillus sakei]	Contains protein domain (PF00185) - Aspartate/ornithine carbamoyltransferase	transferase	264769
807	80381812 (1613, 1614)	Novel Protein sim. GBank gij2633311 (sp O21828) (YNF0_CAEEL - HYPOTHETICAL 18.9 KD PROTEIN R07E5.13 IN CHROMOSOME III)			264764

808	35106817 (1615, 1616)	Novel Protein sim. GBank gi39130921sp O46170 ARCO_CLOPE - ARGININE/ORNITHINE ANTIPORTER		transport	264909, 264602, 21906764, 18108374
809	81454254 (1617, 1618)	Novel Protein sim. GBank gi39130161sp P74309 ALF1_SYNY3 - FRUCTOSE- BISPHOSPHATE ALDOLASE CLASS I (FBP ALDOLASE)	Contains protein domain (PF00274) - Fructose-bisphosphate aldolase class-I	UNCLASSIFIED	264508, 264906, 264909, 265007, 264910, 264758, 264600, 264602, 264603, 264605, 264687, 264769, 264689, 264636, 264486
810	80192761 (1619, 1620)	Novel Protein sim. GBank gi4014721sp P30863 YAFB_ECOLI - HYPOTHETICAL OXIDOREDUCTASE IN ASPU-MLTD INTERGENIC REGION	Contains protein domain (PF00248) - Aldo/keto reductase family	reductase	264369
811	80079280 (1621, 1622)			UNCLASSIFIED	264558
812	10297654 (1623, 1624)			UNCLASSIFIED	264692
813	79612280 (1625, 1626)			UNCLASSIFIED	264906
814	80473427 (1627, 1628)	Novel Protein sim. GBank gi1146188 (J01617) - glutaminyl- RNA synthetase [Escherichia coli]		synthase	264905, 264602, 264605, 264682, 264687, 264769, 264636
815	95419513 (1629, 1630)	Novel Protein sim. GBank gi4589652 dbj BAA76848.1 - (AB023221) KIAA1004 protein [Homo sapiens]		UNCLASSIFIED	264488, 22278998, 22278999, 29331822, 29331824, 29331825, 29331827, 29331828, 29146499, 264905, 264908, 265007, 33657402, 80433358, 80433438, 264758, 265011, 265017, 265018, 265019, 264369, 264288, 264685, 21906765, 21906767, 265020, 265021, 264692, 65274620, 33657109, 264628, 18108376, 264635, 264638, 60170394, 58182323, 264564
816	19881910 (1631, 1632)				264600
817	95293316 (1633, 1634)	Novel Protein sim. GBank gi1781144 emb CA06254 - (Z83866) hypothetical protein Rv3069 [Mycobacterium tuberculosis]		UNCLASSIFIED	264595
818	80938190 (1635, 1636)	Novel Protein sim. GBank gi1477468 (U35244) - vacuolar protein sorting homolog r-vps33a [Rattus norvegicus]			65274572, 22278999, 60424269, 35896052, 55812038, 21906768, 55811957, 35695917, 33657023, 18108370, 18108374, 55810764, 35696423, 55811576, 264636
819	80254977 (1637, 1638)	Novel Protein sim. GBank gi1001352 dbj BAA10839 - (D64006) ABC transporter [Synechocystis sp.]		transport	264565
820	80059688 (1639, 1640)	Novel Protein sim. GBank gi5868141sp P37484 YYBT_BACSU - HYPOTHETICAL 74.3 KD PROTEIN IN RPLI-COTF INTERGENIC REGION		UNCLASSIFIED	264600, 264602, 264604
821	79762590 (1641, 1642)			UNCLASSIFIED	264910
822	80215310 (1643, 1644)			UNCLASSIFIED	264510, 264594, 264637
823	94992299 (1645, 1646)	Novel Protein sim. GBank gi3878400 emb CAA95828 - (Z71264) predicted using GeneFinder; Weak similarity to Mouse T-complex-associated-testes-expressed-1 protein (PIR Acc. No. A45841); cDNA EST EMBL:D32742 comes from this gene; cDNA EST EMBL:D33617 comes from this gene; cDNA EST...		struct	264509, 264687, 264691
824	80411171 (1647, 1648)	Novel Protein sim. GBank gi1370076 emb CAA66887 - (X98235) type I [Drosophila melanogaster]	Contains protein domain (PF01429) - Methyl-CpG binding domain		264910, 264763, 264769, 264693

825	20638600 (1649, 1650)	Novel Protein sim. GBank gij3025132[sp]P77391[YEAG_ECOLI - HYPOTHETICAL 74.5 KD PROTEIN IN GAPA-RND INTERGENIC REGION (AL021648) hypothetical protein Rv3202c [Mycobacterium tuberculosis]		UNCLASSIFIED	264592
826	11075047 (1651, 1652)	Novel Protein sim. GBank gij324228[emb]CAA16669] - (AL021648) hypothetical protein Rv3202c [Mycobacterium tuberculosis]			264605
827	80054207 (1653, 1654)	Novel Protein sim. GBank gij341742[emb]CAA20312] - (AL031261) putative transport protein [Schizosaccharomyces pombe]			264603
828	95106322 (1655, 1656)	Novel Protein sim. GBank gij4336692[gb]AAD17897] - (AF101361) Abnormal X segregation [Drosophila melanogaster]		UNCLASSIFIED	52645080, 264508, 264905, 264509, 264906, 264807, 264908, 264909, 264512, 264910, 264591, 264758, 264600, 264766, 264768, 21906788, 35695917, 264691, 264628, 264630, 264631, 264632, 264634, 264635, 264636, 264637, 264558, 264639, 83373044, 18108385, 264583, 264566, 264486
829	81742215 (1657, 1658)			UNCLASSIFIED	264758, 264634
830	20396091 (1659, 1660)	Novel Protein sim. GBank gij3820539 (AF080002) - UDP-N- acetylmutamyl tripeptide synthetase MurC [Helicobacter mobilis]		UNCLASSIFIED	264603
831	87112435 (1661, 1662)			UNCLASSIFIED	86714117, 264910, 264639
832	18436322 (1663, 1664)	Novel Protein sim. GBank gij1870004[emb]CAB0885] - (Z02539) hypothetical protein Rv1024 [Mycobacterium tuberculosis]		UNCLASSIFIED	264906
833	20726654 (1665, 1666)	Novel Protein sim. GBank gij2500056[sp]Q46267[PFLA_CLOPA - PYRUVATE FORMATE-LYASE ACTIVATING ENZYME		UNCLASSIFIED	264602
834	21428762 (1667, 1668)	Novel Protein sim. GBank gij2497531[sp]Q46078[KPYK_CORGL - PYRUVATE KINASE (PK)	Contains protein domain (PF00224) - Pyruvate kinase	kinase	264600, 264602, 264769, 264689, 264636
835	94140482 (1669, 1670)				264768, 263994, 21906767, 264910, 264632, 264635, 264259, 264639, 264693, 83373044, 264758, 35696052, 22279002, 264508, 264905, 264906, 264448, 263972, 264908, 264909
836	66126552 (1671, 1672)	Novel Protein sim. GBank gij699315 (U15184) - phosphate transport protein PSTC [Mycobacterium leprae]		transport	35695917, 264557
837	79450450 (1673, 1674)			UNCLASSIFIED	264595
838	79184203 (1675, 1676)	Novel Protein sim. GBank gij728667[sp]P40602[APG_ARATH - ANTER-SPECIFIC PROLINE-RICH PROTEIN APG PRECURSOR		UNCLASSIFIED	264687
839	78641125 (1677, 1678)	Novel Protein sim. GBank gij2496533[sp]Q50598[YOD8_MYCTU - HYPOTHETICAL 69.9 KD PROTEIN CY1A11.08		UNCLASSIFIED	264906
840	60059851 (1679, 1680)	Novel Protein sim. GBank gij4557753[sp]NP_000372.1pMID1 - midline 1 protein Zinc finger, C3HC4 type (RING finger)	Contains protein domain (PF000097) - Zinc finger, C3HC4 type (RING finger)	interleukinrecept	264762, 264556

841	80376318 (1681, 1682)	Novel Protein sim. GBank gi1139805 sp P08045 XFIN_XENLA - XFIN PROTEIN	Contains protein domain (PF000096) - Zinc finger, C2H2 type	transcription factor	264764
842	80078724 (1683, 1684)	Novel Protein sim. GBank gi12114321 dbj BAA200371 - (D88733) membrane glycoprotein [Equine herpesvirus 1]	Contains protein domain (PF00569) - Zinc finger present in dystrophin, CBP/p300	UNCLASSIFIED	264905, 264908, 265008, 265009, 18108374, 56182323, 264558
843	87002847 (1685, 1686)	Novel Protein sim. GBank gi13882325 dbj BAA34522.1 - (AB018345) KIAA0802 protein [Homo sapiens]	Contains protein domain (PF001170) - struct bZIP transcription factor		264091, 29331825, 264908, 264768, 264563
844	17941439 (1687, 1688)	Novel Protein sim. GBank gi12224721 dbj BAA20844 - (AB002388) KIAA0390 [Homo sapiens]	Contains protein domain (PF000096) - Zinc finger, C2H2 type	transcription factor	265011
845	18346844 (1689, 1690)				264629
846	79883441 (1691, 1692)	Novel Protein sim. GBank gi1625679 pir A36929 - vinulence regulatory protein VsrB - Pseudomonas solanacearum		kinase	264907
847	78695348 (1693, 1694)				264909
848	78489385 (1695, 1696)			UNCLASSIFIED	265020
849	79756387 (1697, 1698)			UNCLASSIFIED	264568
850	78817849 (1699, 1700)	Novel Protein sim. GBank gi13183245 sp P78061 YC_JK_ECOLI - PUTATIVE GLUTAMINE SYNTHETASE (GLUTAMATE-AMMONIA LIGASE)	Contains protein domain (PF00120) - Glutamine synthetase	UNCLASSIFIED	264909
851	95320333 (1701, 1702)	Novel Protein sim. GBank gi15454130 ref NP_008280.1 ptTLN - talin	Contains protein domain (PF01608) - ILWEE domain		264488, 52644507, 264489, 18108398, 65274572, 56182575, 22278994, 22278995, 22278996, 35696286, 22278997, 22278998, 22278999, 20281171, 264490, 264259, 52645080, 29331822, 29331824, 66714117, 29331825, 60432289, 29331826, 29331827, 35696052, 29331828, 29146498, 29146499, 264107, 264905, 264906, 264907, 264908, 52644045, 56182435, 265006, 265007, 265008, 265009, 264910, 60432229, 60431735, 60433356, 33657402, 60433438, 264595, 264758, 264759, 21906754, 33109954, 52644296, 265010, 265011, 87168559, 265017, 265018, 265019, 264760, 264761, 264762, 264681, 18108351, 264763, 264448, 264682, 264764, 264683, 18108354, 264288, 264389, 264685, 264766, 264687, 264768, 264769, 21906765, 21906766, 21906767, 21906768, 29148627, 21906769, 29148628, 55811957, 35695917, 265020, 265021, 265022, 60170815, 52644150, 264691, 264692, 33857023, 264693, 263966, 33657109, 27486261, 27486262, 27486264, 27486265, 35695763, 60431602, 18108370, 20281089, 264629, 18108374, 18108376, 55811576, 35696423, 35695855, 264634, 264635, 264636, 264555, 60431850, 264556, 264691
852	10147366 (1703, 1704)				264691

853	13032587 (1705, 1706)					264636
854	80052438 (1707, 1708)	Novel Protein sim. GBank gi 3402836 emb CAA76082 - (Y16136) 2-enoate reductase [Moorella thermoacetica]	reductase			264566
855	70641130 (1709, 1710)					264692
856	11594238 (1711, 1712)		UNCLASSIFIED			264591
857	79210165 (1713, 1714)		UNCLASSIFIED			264630, 264634
858	80248910 (1715, 1716)					265008, 265009, 264601, 264602, 264603, 18108351
859	20296634 (1717, 1718)					264559
860	80041749 (1719, 1720)		UNCLASSIFIED			264489
861	65857045 (1721, 1722)		UNCLASSIFIED			33657023, 264630
862	80079467 (1723, 1724)					264600
863	80579931 (1725, 1726)	Novel Protein sim. GBank gi 2246532 (U93872) - ORF 73, contains large complex repeat CR 73 [Kaposi's sarcoma-associated herpesvirus]	UNCLASSIFIED			264488, 18108398, 35696286, 264259, 18108351, 264288, 265021
864	94939904 (1727, 1728)					264259, 264112, 263974
865	80045310 (1729, 1730)	Novel Protein sim. GBank gi 5689884 emb CAB52047.1 - (AL109732) hypothetical protein [Streptomyces coelicolor A3(2)]	Contains protein domain (PF01479) - S4 domain			264635, 264600, 264636, 264591, 264602, 264693
866	80162031 (1731, 1732)	Novel Protein sim. GBank gi 4557876 ref NP_000341.1 pABCR - ATP binding cassette transporter	transport			264288, 264557, 264558
867	80062402 (1733, 1734)					264605
868	10075384 (1735, 1736)		UNCLASSIFIED			264909
869	80062406 (1737, 1738)					264605, 264687, 18108374
870	80249651 (1739, 1740)	Novel Protein sim. GBank gi 628660 pir S37755 - Adenylyl-transferase - Escherichia coli	transferase			264601, 264636
871	20378295 (1741, 1742)	Novel Protein sim. GBank gi 1708180 sp Q10602 HEMK_MYCTU - HEMK PROTEIN HOMOLOG	UNCLASSIFIED			264603
872	95197114 (1743, 1744)	Novel Protein sim. GBank gi 1545959 emb CAA67763 - (X99384) paladin [Mus musculus]	UNCLASSIFIED			35696286, 22278998, 264259, 29331822, 29331824, 29331825, 60432289, 29331826, 29331827, 29331828, 35696052, 264509, 264905, 264906, 264907, 264908, 264909, 264510, 265008, 264511, 264512, 265007, 265008, 265009, 264910, 264591, 60433356, 264596, 52646317, 87168474, 265010, 264602, 264603, 265017, 265018, 264605, 18108351, 264764, 264766, 264768, 52644228, 264769, 21906765, 265021, 264534, 264691, 52645129, 264628, 264629, 35696423, 65274791, 264631, 264632, 264635, 264636, 264556, 264637, 264638, 264639, 60432113, 22279000, 22279002, 264564
873	20189728 (1745, 1746)	Novel Protein sim. GBank gi 4156104 (AE001589) - putative Outer membrane protein [Helicobacter pylori J99]	Contains protein domain (PF000096) - Zinc finger, C2H2 type	UNCLASSIFIED		264595

874	80077692 (1747, 1748)	Novel Protein sim. GBank gij134319[sp]P07819[SCRB_BACSU - SUCROSE-6- PHOSPHATE HYDROLASE (SUCRASE) (INVERTASE)] human (fragment)		UNCLASSIFIED	264600
875	86608448 (1749, 1750)	Novel Protein sim. GBank gij481000[pil]S37594 - mucin - human (fragment)			264259, 264448, 264288, 264557, 87168518
876	86465157 (1751, 1752)	Novel Protein sim. GBank gij3128283 (AF010496) - iron(iii) dicitrate transport ATP-binding protein [Rhodobacter capsulatus]	Contains protein domain (PF00005) - ABC transporter	transport	264907, 264601, 264602, 264605, 265020, 60431602
877	87802548 (1753, 1754)	Novel Protein sim. GBank gij731074[sp]P40349[URB1_ USTMA - SIDEROPHORE BIOSYNTHESIS REGULATORY PROTEIN URBS1]	Contains protein domain (PF00320) - GATA zinc finger	transcriptfactor	22278998, 264909, 264369
878	80187289 (1755, 1756)	Novel Protein sim. GBank gij1351614[sp]Q09853[JAED_SCHPO - HYPOTHETICAL 181.5 KD PROTEIN C2303.13C IN CHROMOSOME I (Z74030)] predicted using GeneFinder; cDNA EST EMBL: C07608 comes from this gene; cDNA EST EMBL: C09023 comes from this gene; cDNA EST yk505e9.3 comes from this gene; cDNA EST yk488h9.3 comes from this gene; cDNA EST yk489h9.5 com...		ATPase_associated	264369, 264555
879	94328962 (1757, 1758)	Novel Protein sim. GBank gij13875304[emb]CAA984341 - (Z74030)] predicted using GeneFinder; cDNA EST EMBL: C07608 comes from this gene; cDNA EST EMBL: C09023 comes from this gene; cDNA EST yk505e9.3 comes from this gene; cDNA EST yk488h9.3 comes from this gene; cDNA EST yk489h9.5 com...			56182575, 29331824, 264508, 264906, 265018, 18108351, 264448, 264683, 21906768, 21908768, 60170815, 33657023, 65274620, 33657109, 18108374, 35695855, 264563
880	8491135 (1759, 1760)	Novel Protein sim. GBank gij137120[sp]P11214[UROT_MOUSE - TISSUE PLASMINOGEN ACTIVATOR PRECURSOR (TPA) (T- PLASMINOGEN ACTIVATOR)]	Contains protein domain (PF000051) - K-1 ring domain	cathepsin	264508
881	11290122 (1761, 1762)	Novel Protein sim. GBank gij2632098[emb]CAA756671 - (Y15513) Prodios protein [Drosophila melanogaster]		UNCLASSIFIED	264508
882	11077011 (1763, 1764)	Novel Protein sim. GBank gij2632098[emb]CAA756671 - (Y15513) Prodios protein [Drosophila melanogaster]		UNCLASSIFIED	264558
883	79582969 (1765, 1766)	Novel Protein sim. GBank gij1155068[emb]CAA644251 - (X94976) cell wall-plasma membrane linker protein [Brassica napus]		UNCLASSIFIED	264688
884	13517921 (1767, 1768)	Novel Protein sim. GBank gij2078027[emb]CAB084671 - (Z95208) hypothetical protein Rv2372c [Mycobacterium tuberculosis]		UNCLASSIFIED	264636
885	80052457 (1769, 1770)	Novel Protein sim. GBank gij2078027[emb]CAB084671 - (Z95208) hypothetical protein Rv2372c [Mycobacterium tuberculosis]		UNCLASSIFIED	264605, 18108362
886	11685136 (1771, 1772)	Novel Protein sim. GBank gij2695834[emb]CAA159041 - (AL021006) sucA [Mycobacterium tuberculosis]			264690
887	94315307 (1773, 1774)	Novel Protein sim. GBank gij5689395[dbj]BAA82981.11 - (AB028952) KIAA1029 protein [Homo sapiens]	dehydrogenase		35696052, 264906, 264600, 264603, 35695917, 35695855, 264638
888	10083399 (1775, 1776)	Novel Protein sim. GBank gij11881338[dbj]BAA193651 - (AB001488) PROBABLE INTEGRAL MEMBRANE PROTEIN, SIMILAR TO CHLORAMPHENICOL RESISTANCE PROTEIN OF STREPTOMYCES VENEZUELAE [Bacillus subtilis]		UNCLASSIFIED	264908
889	20385917 (1777, 1778)	Novel Protein sim. GBank gij11881338[dbj]BAA193651 - (AB001488) PROBABLE INTEGRAL MEMBRANE PROTEIN, SIMILAR TO CHLORAMPHENICOL RESISTANCE PROTEIN OF STREPTOMYCES VENEZUELAE [Bacillus subtilis]			264603
890	18904337 (1779, 1780)	Novel Protein sim. GBank gij1854065[emb]CAA583371 - (X83413) U88 [Human herpesvirus 6]			264629

891	13516879 (1781, 1782)	Novel Protein sim. GBank gij4959396gb AAD34331.1 AF11248 - (AF112481) RAD54B protein [Homo sapiens]		UNCLASSIFIED	264636
892	87634157 (1783, 1784)	Novel Protein sim. GBank gij545526jbs j43833 - LBP- 1b=transcription factor binding to initiation site of HIV-1 (alternatively spliced) [human, Namalwa cells, Peptide, 541 aa]		transcription factor	22278996, 22278999, 29331828, 35696052, 264908, 264909, 265009, 265011, 264602, 265019, 264766, 21906765, 21906766, 21906769, 265020, 265021, 56526486 264689, 263967
893	79168037 (1785, 1786)	Novel Protein sim. GBank gij2829888sp P80608 CYSK_MAIZE - CYSTEINE SYNTHASE (O-ACETYL SERINE SULFHYDRYLASE) (O- ACETYL SERINE (THIO)LYASE) (CSASE)		synthase	
894	11102240 (1787, 1788)				263978
895	80239868 (1789, 1790)			UNCLASSIFIED	264508, 264600, 264555, 264559
896	79747803 (1791, 1792)				264632
897	94991923 (1793, 1794)		Contains protein domain (PF00047) - Immunoglobulin domain	UNCLASSIFIED	264686, 29331828, 264511
898	87895109 (1795, 1796)				56182575, 60432289, 56182435, 60432229, 55811957, 22279000, 264486
899	11100463 (1797, 1798)				264601
900	80499768 (1799, 1800)	Novel Protein sim. GBank gij1750127 (U66480) - YncC [Bacillus subtilis]		transport	264769, 264691, 264563
901	80502410 (1801, 1802)	Novel Protein sim. GBank gij322879sp O07438 SYA_MYCTU - ALANYL-TRNA SYNTHETASE (ALANINE-TRNA LIGASE) (ALARS)	Contains protein domain (PF01411) - tRNA synthetases class II (A)	synthase	264907, 264602, 264605, 264769, 35695917, 18108376, 264563
902	80503301 (1803, 1804)	Novel Protein sim. GBank gij3355701 emb CAA220011 - (AL031124) 3-isopropylmalate dehydratase large subunit [Streptomyces coelicolor]	Contains protein domain (PF00330) - Aconitase family (aconitate hydratase)	isomerase	264909, 265008, 264602, 264604, 264769, 264689, 264693
903	82060208 (1805, 1806)	Novel Protein sim. GBank gij2960120 emb CAA18018.1 - (AL022121) gipK [Mycobacterium tuberculosis]	Contains protein domain (PF00370) - FGG family of carbohydrate kinases	kinase	35696052, 264905, 264510, 264511, 264512, 264605, 264760, 18108351, 264762, 264687, 264768, 264769, 264688, 21906764, 35695917, 27486262, 35695855, 264634, 264638, 264486
904	20451078 (1807, 1808)	Novel Protein sim. GBank gij28887sp P40906 ARGI_COCIM - ARGINASE	Contains protein domain (PF00491) - Arginase family	hydrolase	264604
905	9398483 (1809, 1810)	Novel Protein sim. GBank gij4567200gb AAD23616.1 AC00716 - (AC007168) hypothetical protein [Arabidopsis thaliana]		UNCLASSIFIED	264909
906	80052628 (1811, 1812)	Novel Protein sim. GBank gij3738200 emb CAA212921 - (AL031855) putative vacuolar membrane protein [Schizosaccharomyces pombe]			264595, 264605
907	87913201 (1813, 1814)			UNCLASSIFIED	60432289, 264601, 264690
908	11754482 (1815, 1816)			UNCLASSIFIED	264638
909	20727907 (1817, 1818)	Novel Protein sim. GBank gij3868940 dbj BAA342961 - (AB015054) Alg2 [Rhizomucor pusillus]		UNCLASSIFIED	264602
910	16776206 (1819, 1820)	Novel Protein sim. GBank gij4589726 dbj BAA76883.1 - (AB003137) DnaJ homolog protein [Salix glauca]	Contains protein domain (PF00584) - DnaJ central domain (4 repeats)	eph	265009

911	87454340 (1821, 1822)	Novel Protein sim. GBank gi 548774 sp P35685 RL7A_ORYSA - 80S RIBOSOMAL PROTEIN L7A		ribosomalprot.	265010, 264604, 60432113
912	20448863 (1823, 1824)	Novel Protein sim. GBank gi 2314008 gb AAD07821.1 - (AE000597) CDP-diglyceride hydrolase (cdh) [Helicobacter pylori 26695]		hydrolase	264559
913	20469357 (1825, 1826)			UNCLASSIFIED	264604
914	79183351 (1827, 1828)	Novel Protein sim. GBank gi 417657 sp Q03604 IR1. CAEEL - PROBABLE RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LARGE CHAIN (RIBONUCLEOTIDE REDUCTASE)	Contains protein domain (PF00317) - Ribonucleotide reductase	reductase	264636
915	87606703 (1829, 1830)	Novel Protein sim. GBank gi 5689571 dbj BAA83069.1 - (AB029040) KIAA1117 protein [Homo sapiens]			18108398, 22278996, 66714117, 264908, 264591, 21908768, 265020, 55811576, 264638
916	79444091 (1831, 1832)	Novel Protein sim. GBank gi 4186110 emb CAA71790 - (Y10831) putative integrase [Raietonia eutropha]		UNCLASSIFIED	264595
917	20195985 (1833, 1834)	Novel Protein sim. GBank gi 1655699 emb CAA69032 - (Y07752) perophorin-S [Volvox carter]		UNCLASSIFIED	264605
918	91228785 (1835, 1836)	Novel Protein sim. GBank gi 5689968 emb CAB52005.1 - (AL109663) putative membrane protein [Streptomyces coelicolor A3(2)]		synthase	264259, 29331826, 264908, 265019, 264448, 265020, 264635, 83373044
919	80438785 (1837, 1838)	Novel Protein sim. GBank gi 3850084 emb CAA21911.1 - (AL033389) alcohol dehydrogenase [Schizosaccharomyces pombe]			265006, 264512, 264600, 264602, 264604, 264768, 18108370, 264563
920	79606095 (1839, 1840)	Novel Protein sim. GBank gi 1169448 sp Q05813 JAMP1_STRL1 - XAA-PRO AMINOPEPTIDASE I (X-PRO AMINOPEPTIDASE I) (AMINOPEPTIDASE P I) (APP) (PEPP I) (AMINOACYLPROLINE AMINOPEPTIDASE I)		peptidase	264508
921	19858634 (1841, 1842)	Novel Protein sim. GBank gi 3850084 emb CAA21911.1 - (AL033389) alcohol dehydrogenase [Schizosaccharomyces pombe]		UNCLASSIFIED	264600
922	78882605 (1843, 1844)				265019, 22279002
923	86685830 (1845, 1846)	Novel Protein sim. GBank gi 267079 sp P29514 TB86_ARATH - TUBULIN BETA-6 CHAIN		tubulin	264907, 265008, 265009, 265010, 18108351, 264689, 265021, 18108370, 18108374, 18108385
924	21431341 (1847, 1848)				264510
925	20630332 (1848, 1850)	Novel Protein sim. GBank gi 2497688 sp Q06063 PAFA_MOUSE - PLATELET- ACTIVATING FACTOR ACETYLHYDROLASE PRECURSOR (PAF ACETYLHYDROLASE) (PAF 2- ACYLHYDROLASE) (LDL-ASSOCIATED PHOSPHOLIPASE A2) (LDL-PLA(2)) (2-ACETYL-1- ALKYLGLYCEROPHOSPHOCHOLINE ESTERASE) (1- ALKYL-2-ACETYLGLYCEROPHO...		esterase	264603
926	79397857 (1851, 1852)	Novel Protein sim. GBank gi 3682325 dbj BAA34522.1 - (AB018345) KIAA0802 protein [Homo sapiens]			55811957, 263972, 264639
927	37036201 (1853, 1854)			UNCLASSIFIED	264769

928	80070610 (1855, 1856)	Novel Protein sim. GBank gi156146 (M30316) - xanthine dehydrogenase (AA ai 2538) [Calliphora vicina]			dehydrogenase	264605
929	20630336 (1857, 1858)				UNCLASSIFIED	264603
930	5496348 (1858, 1860)	Novel Protein sim. GBank gi4115936[gb]AAD03446.1] - (AF118223) No definition line found [Arabidopsis thaliana]				264259
931	10245731 (1861, 1862)	Novel Protein sim. GBank gi4490609[emb]CAB38642.1] - (AJ133495) ribonucleotide reductase major subunit [Staphylococcus aureus]		Contains protein domain (PF00317) - Ribonucleotide reductase	reductase	264486
932	80420613 (1863, 1864)	Novel Protein sim. GBank gi5459396[emb]CAB50754.1] - (AL086839) putative integral membrane transport protein [Streptomyces coelicolor]			transport	264508, 264905, 264906, 264909, 264600, 264602, 264603, 264605, 264766, 264558, 18108387, 264486
933	94326010 (1865, 1866)	Novel Protein sim. GBank gi5689523[dbj]BA83045.1] - (AB028016) KIAA1093 protein [Homo sapiens]		Contains protein domain (PF00627) - UBA domain	UNCLASSIFIED	264508, 264686, 264693, 27486261, 18108370, 65274791, 264636, 264559, 22279002
934	80039105 (1867, 1868)	Novel Protein sim. GBank gi1191111[sp]P12978[EBN2_EBV - EBNA-2 NUCLEAR PROTEIN]				264369, 22279002
935	80063162 (1869, 1870)					
936	80026632 (1871, 1872)	Novel Protein sim. GBank gi845686 (M32103) - ORF-27 [Staphylococcus aureus]			UNCLASSIFIED	264604, 264605, 264693, 18108370, 18108374
937	80250273 (1873, 1874)	Novel Protein sim. GBank gi1360669[pir]CGHU1V - collagen alpha 1(V) chain precursor - human			UNCLASSIFIED	22278995, 22278996, 264602, 264687, 32833986, 18108387
938	80026633 (1875, 1876)	Novel Protein sim. GBank gi2226243[emb]CAA74531.1] - (Y14083) hypothetical protein [Bacillus subtilis]			synthase	263978
939	11071694 (1877, 1878)				UNCLASSIFIED	264602
940	94144252 (1879, 1880)	Novel Protein sim. GBank gi3560166[emb]CAA20878 - (AL031525) ubiquitin carboxyl-terminal hydrolase [Schizosaccharomyces pombe]		Contains protein domain (PF00442) - Ubiquitin carboxyl-terminal hydrolases family 2	ubiquitin	264600 264905, 264906, 264907, 264908, 264909, 264511, 264910, 264592, 33857402, 264596, 264758, 264760, 264683, 264766, 264768, 264769, 33657023, 33657109, 264628, 264629, 264630, 264635, 264636, 264555, 264637, 264556, 264638, 264639, 83373044, 18108385, 264565, 18108391
941	11398414 (1881, 1882)					264593
942	19484122 (1883, 1884)	Novel Protein sim. GBank gi4033729 (AF038595) - apolipoprotein N-acyltransferase [Pseudomonas aeruginosa]			UNCLASSIFIED	264760
943	80080258 (1885, 1886)				UNCLASSIFIED	264600, 264687, 264689, 264563
944	80216096 (1887, 1888)	Novel Protein sim. GBank gi2494764[sp]Q50729[GUAA MYCTU - GMP SYNTHASE (GLUTAMINE-HYDROLYZING) (GLUTAMINE AMIDOTRANSFERASE) (GMP SYNTHETASE)]			synthase	264511, 264603
945	80052477 (1889, 1890)	Novel Protein sim. GBank gi732353[sp]P39609[YWCH_BACSU - HYPOTHETICAL 38.6 KD PROTEIN IN QOXD-VPR INTERGENIC REGION]		Contains protein domain (PF00818) - Ice nucleation protein repeat	UNCLASSIFIED	264906, 264604, 264605, 265020, 18108387
946	79248402 (1891, 1892)					265017

947	81802699 (1893, 1894)	Novel Protein sim. GBank gij2856770[embjCAA17247] - (AL021899) hypothetical protein RV2033c [Mycobacterium tuberculosis]	Contains protein domain (PF00459) Inositol monophosphatase family	phosphatase	18108394, 22278996, 264907, 264909, 265008, 265009, 264910, 264758, 264600, 264602, 265018, 264605, 264768, 264689, 264693
948	88165538 (1895, 1898)	Novel Protein sim. GBank gij2827284 (AF041037) - novel antagonist of FGF signaling [Homo sapiens]		fgf	18108398, 56182575, 22278997, 22278999, 60432049, 29331822, 29331826, 264907, 56182435, 55811386, 265011, 264600, 265017, 265018, 265019, 18108351, 265020, 265021, 265022, 27486265, 263972, 55811576, 264638, 80170394, 264566
949	88081786 (1897, 1898)	Novel Protein sim. GBank gij4507985[refjNP_003427.1]pZNF1 - zinc finger protein 135 (clone pHZ-17)	Contains protein domain (PF00096) Zinc finger, C2H2 type	transcriptfactor	29331825, 21906764, 27486261, 21906766, 52644296, 33657349, 87168518, 56994075, 265020, 265021, 87168559, 52644150, 264637
950	79485872 (1899, 1900)	Novel Protein sim. GBank gij1079451[prj]S43865 - Cytochrome 8, type II - pitoroo (fragment)	Contains protein domain (PF00038) Intermediate filament proteins	struct	264683, 18108361
951	20451411 (1901, 1902)	Novel Protein sim. GBank gij5420387[embjCAB46679.1] - (AJ243459) proteophosphoglycan [Leishmania major]		UNCLASSIFIED	264604
952	79566954 (1903, 1904)	Novel Protein sim. GBank gij5305702[gb]AAD41779.1[AF126866 - (AF126867) calpain-like protease [Mus musculus]		cathepsin	264910, 264691
953	10196003 (1905, 1906)	Novel Protein sim. GBank gij2495842[sp]Q47142[YFHS, ECOLI - HYPOTHETICAL 41.8 KD PROTEIN IN CSIE-GLYA INTERGENIC REGION]		transport	264510
954	9893326 (1907, 1908)	Novel Protein sim. GBank gij2360965 (AF016253) - D-amino acid dehydrogenase [Klebsiella aerogenes]		dehydrogenase	264508
955	95313410 (1909, 1910)	Novel Protein sim. GBank gij5454064[refjNP_006319.1]pSIP1 - SYT interacting protein	Contains protein domain (PF00076) RNA recognition motif (a.k.a. RRM, RBD, or RNP domain)	dna_rna_bind	56994075, 264509, 264905, 264906, 264907, 264908, 264909, 264510, 264910, 264758, 264759, 265010, 264601, 264760, 18108351, 264762, 264763, 264764, 264766, 264686, 264767, 264887, 264768, 264769, 264689, 264628, 264629, 264630, 264631, 264632, 264634, 264635, 264636, 264637, 264638, 56182323, 264639, 18108388, 264563, 264564
956	80064224 (1911, 1912)	Novel Protein sim. GBank gij2052129[embjCAB08155] - (Z94752) rimJ [Mycobacterium tuberculosis]			264605
957	80056206 (1913, 1914)			UNCLASSIFIED	264603, 18108362
958	80036446 (1915, 1916)	Novel Protein sim. GBank gij1709787[sp]Q00451[PRF1_LYCES - 36.4 KD PROLINE-RICH PROTEIN]		UNCLASSIFIED	264908, 264910, 264762, 263978, 264637
959	80026647 (1917, 1918)	Novel Protein sim. GBank gij2131050[embjCAB09260] - (Z95844) opca [Mycobacterium tuberculosis]		UNCLASSIFIED	264602, 264692
960	37815406 (1919, 1920)	Novel Protein sim. GBank gij2129478[prj]S51939 - chitinase (EC 3.2.1.14) precursor - beet		UNCLASSIFIED	264259
961	20567383 (1921, 1922)				263978
962	11399318 (1923, 1924)				264593

963	80590374 (1925, 1926)				UNCLASSIFIED	264510, 264288, 264555, 264556, 264559, 264486
964	79832019 (1927, 1928)	Novel Protein sim. GBank gll4589622[dbj BAA76833.1] - (AB023206) KIA0989 protein [Homo sapiens]			UNCLASSIFIED	264112, 264910, 264689
965	91229485 (1929, 1930)	Novel Protein sim. GBank gll5420387[emb CA846679.1] - (AJ243459) proleophosphoglycan [Leishmania major]			UNCLASSIFIED	264488, 265017, 264448, 264634, 264558, 83373044
966	95232815 (1931, 1932)				UNCLASSIFIED	264906, 264592, 264586, 264604, 264768, 21908764, 264692, 264693, 264629, 264636, 264638
967	79255708 (1933, 1934)	Novel Protein sim. GBank gll1731207[sp Q11156 RGX3_MYCTU - SENSORY TRANSDUCTION PROTEIN REGX3	Contains protein domain (PF000072) - Response regulator receiver domain	phosphatase		264780
968	79560268 (1935, 1936)	Novel Protein sim. GBank gll2661836[emb CAA75187] - (Y14964) putative transport protein [Methylophilus methylotrophus]		transport		264693
969	79918470 (1937, 1938)	Novel Protein sim. GBank gll541887[emb CA846422.1] - (AL086747) hypothetical protein [Homo sapiens]	Contains protein domain (PF00096) - Zinc finger, C2H2 type	dna_ma_bind		35698288, 264685, 264686, 35695917, 264692, 18108374, 264635
970	95085947 (1939, 1940)			UNCLASSIFIED		18108392, 18108394, 18108398, 22278995, 22278996, 22278998, 22278999, 29147620, 264828, 265006, 265007, 265008, 265009, 18108348, 33109954, 265010, 265011, 18108351, 264288, 21906767, 21906768, 18108370, 18108374, 18108377, 264630, 264635, 18108380, 83373044, 18108387, 18108388
971	78919770 (1941, 1942)			UNCLASSIFIED		265007, 265020, 22279002
972	20710704 (1943, 1944)					264557
973	20370183 (1945, 1946)	Novel Protein sim. GBank gll1723119[sp P53990 Y174_HUMAN - HYPOTHETICAL PROTEIN KIAA0174				264604
974	80057103 (1947, 1948)			UNCLASSIFIED		264565
975	10196018 (1949, 1950)			UNCLASSIFIED		264510
976	80205742 (1951, 1952)	Novel Protein sim. GBank gll3881459[emb CAA92988.1] - (Z68753) predicted using GeneFinder. Similarity to Yeast hypothetical protein YIK9 (SW:YIK9_YEAST); cDNA EST EMBL:D27680 comes from this gene; cDNA EST EMBL:D27679 comes from this gene; cDNA EST EMBL:D64477 comes from this ge...		UNCLASSIFIED		264563
977	10355349 (1953, 1954)	Novel Protein sim. GBank gll549458[sp Q05335 XYS3_PSEPU - XYLDLEGF OPERON TRANSCRIPTIONAL ACTIVATOR 3		UNCLASSIFIED		264906
978	80025927 (1955, 1956)			UNCLASSIFIED		264600, 264602, 264603, 264604
979	80447820 (1957, 1958)	Novel Protein sim. GBank gll3171904[emb CAA75869] - (Y15908) DIA-12C protein [Homo sapiens]		UNCLASSIFIED		264767, 264768, 265006, 265007, 264906
980	80025928 (1959, 1960)			UNCLASSIFIED		264600, 264602, 264605
981	80098550 (1961, 1962)	Novel Protein sim. GBank gll3599940 (AF017368) - faclogential dysplasia protein 2 [Mus musculus]		UNCLASSIFIED		264692, 264555, 264556, 264557, 264559

982	80195670 (1983, 1984)	Novel Protein sim. GBank gij2950220[embjCAA71575] - (Y10545) fused-ccdB [Escherichia coli]		UNCLASSIFIED	264404
983	90995041 (1965, 1966)	Novel Protein sim. GBank gij476389iprj[B43402] - myosin heavy chain-B, neuronal - chicken		struct	65274572, 58182575, 264908, 264909, 265007, 265008, 264758, 265010, 55811150, 33657023, 264634, 264557, 264558
984	20466876 (1987, 1988)	Novel Protein sim. GBank gij3451504[embjCAA07660.1] - (AJ007747) hypothetical protein BbLPS1.21 [Bordetella bronchiseptica]	Contains protein domain (PF00534) - Glycosyl transferases group 1	UNCLASSIFIED	264605
985	65461368 (1969, 1970)	Novel Protein sim. GBank gij2105049[embjCAB08835] - (Z95436) hypothetical protein Rv3845 [Mycobacterium tuberculosis]		transferase	56182435, 264600
986	87102868 (1971, 1972)	Novel Protein sim. GBank gij3329297 (AE001355) - Ribonucleoside Reductase, Large Chain [Chlamydia trachomatis]		UNCLASSIFIED	264106, 264110, 265020, 60170615
987	79867231 (1973, 1974)	Novel Protein sim. GBank gij5106572[gbjAAD38760.1]AF14394 - (AF143946) transcriptional activator SRCAP [Homo sapiens]		UNCLASSIFIED	264909
988	19858681 (1975, 1976)	Novel Protein sim. GBank gij1008140 (1981, 1982)		UNCLASSIFIED	264600
989	88095329 (1977, 1978)	Novel Protein sim. GBank gij2105049[embjCAB08835] - (Z95436) hypothetical protein Rv3845 [Mycobacterium tuberculosis]	Contains protein domain (PF01421) - Reprolysin (M12B) family zinc metalloprotease	UNCLASSIFIED	264508, 265017, 264534, 264564
990	88057748 (1978, 1980)	Novel Protein sim. GBank gij2105049[embjCAB08835] - (Z95436) hypothetical protein Rv3845 [Mycobacterium tuberculosis]	Contains protein domain (PF00211) - Adenylate and Guanylate cyclase catalytic domain	UNCLASSIFIED	264259, 264908, 265009, 264910, 264596, 264369, 264288, 264766, 264628, 264635, 264568
991	10108140 (1981, 1982)	Novel Protein sim. GBank gij3329297 (AE001355) - Ribonucleoside Reductase, Large Chain [Chlamydia trachomatis]		UNCLASSIFIED	264909
992	79845694 (1983, 1984)	Novel Protein sim. GBank gij3329297 (AE001355) - Ribonucleoside Reductase, Large Chain [Chlamydia trachomatis]		UNCLASSIFIED	264508, 264593
993	10814053 (1985, 1986)	Novel Protein sim. GBank gij3329297 (AE001355) - Ribonucleoside Reductase, Large Chain [Chlamydia trachomatis]		reductase	264907
994	11090590 (1987, 1988)	Novel Protein sim. GBank gij3329297 (AE001355) - Ribonucleoside Reductase, Large Chain [Chlamydia trachomatis]			264602
995	94321911 (1989, 1990)	Novel Protein sim. GBank gij5106572[gbjAAD38760.1]AF14394 - (AF143946) transcriptional activator SRCAP [Homo sapiens]	Contains protein domain (PF00176) - SNF2 and others N-terminal domain	helicase	18108398, 65274572, 22278996, 264490, 60432049, 29331827, 29146498, 264508, 264905, 264907, 264908, 56182435, 265008, 264591, 264592, 60432228, 60431735, 33657402, 264595, 264758, 21906754, 265010, 265017, 265018, 264605, 264760, 264448, 264763, 264768, 21906765, 21906768, 21906769, 55811857, 264692, 264693, 264629, 35896423, 55811576, 35695855, 264636, 264555, 264556, 264558, 83373044, 22279002, 264563
996	91013745 (1991, 1992)	Novel Protein sim. GBank gij2811719 (AC004227) - KIA001LB [Homo sapiens]	Contains protein domain (PF00595) - PDZ domain (Also known as DHR or GLGF)	phosphatase	83373044, 29331824, 263978, 55811957, 56526486, 87188518, 264910, 264906, 264565, 264566, 264693, 264766
997	80503347 (1993, 1994)	Novel Protein sim. GBank gij2649101 (AE001001) - ABC transporter, ATP-binding protein [Archaeoglobus fulgidus]	Contains protein domain (PF00005) - ABC transporter	transport	35696286, 22278997, 22278999, 264508, 264905, 264908, 265010, 264600, 264602, 264605, 264888, 264769, 265021, 264565, 18108391
998	11397390 (1995, 1996)	Novel Protein sim. GBank gij123530[spjP04929]HRPX_PLALO - HISTIDINE-RICH GLYCOPROTEIN PRECURSOR			264595

999	11768047 (1997, 1998)	Novel Protein sim. GBank gi 2306697 sp P46490 YFCA_HAEIN - HYPOTHETICAL PROTEIN H10198		UNCLASSIFIED	264682	
1000	20727844 (1998, 2000)			UNCLASSIFIED	264602	
1001	86673131 (2001, 2002)	Novel Protein sim. GBank gi 2224689 db BAA20833 - (AB002377) KIAA0379 [Homo sapiens]	Contains protein domain (PF000023) - Ank repeat	UNCLASSIFIED	60432049, 264907, 264909, 264511, 264603, 264683, 264684, 264687, 264689, 29146627, 21906789, 264692, 18108385, 22279000 265009, 264369, 265020	
1002	80189603 (2003, 2004)	Novel Protein sim. GBank gi 588121 sp P37709 TRHY_RABIT - TRICHOHYALIN	struct			
1003	17833491 (2005, 2006)				265019	
1004	16314887 (2007, 2008)	Novel Protein sim. GBank gi 854065 emb CAA58337 - (X83413) U88 [Human herpesvirus 6]			264635	
1005	79617144 (2008, 2010)	Novel Protein sim. GBank gi 114073 sp P07672 APT_ECOLI - ADENINE PHOSPHORIBOSYLTRANSFERASE (APRT)		UNCLASSIFIED	264508	
1006	37815429 (2011, 2012)	Novel Protein sim. GBank gi 4062979 db BAA36210.1 - (AB017138) epsilon subunit of malonate decarboxylase [Pseudomonas putida]		UNCLASSIFIED	264259	
1007	79620871 (2013, 2014)			synthase	264905	
1008	86094444 (2015, 2016)	Novel Protein sim. GBank gi 2808807 emb CAA04607.1 - (AJ001206) putative trehalose synthase [Streptomyces coelicolor]		synthase	265007, 264602, 264605, 264760, 264636	
1009	57451289 (2017, 2018)	Novel Protein sim. GBank gi 3639077 (AF090113) - AMPA receptor binding protein [Rattus norvegicus]	Contains protein domain (PF00595) - PDZ domain (Also known as DHR or GLGF)	kinase	264102, 264288	
1010	94672537 (2019, 2020)	Novel Protein sim. GBank gi 3746332 (AF016307) - possible NADH-dependent oxidase, may function as a demethylase [Sinorhizobium meliloti]		dehydrogenase	264592	
1011	85546916 (2021, 2022)	Novel Protein sim. GBank gi 2342647 gb AA86591.1 - (U90653) DHC-domain-containing cysteine-rich protein [Homo sapiens]		UNCLASSIFIED	35696032, 264905, 264764, 264768, 35695917, 264629	
1012	85294456 (2023, 2024)	Novel Protein sim. GBank gi 3413411 emb CAA20272 - (AL031231) guanosine pentaphosphate synthetase/ polynucleotide nucleotidyltransferase [Streptomyces coelicolor]	Contains protein domain (PF00013) - KH domain	phosphorylase	35696032, 264905, 264600, 264601, 264602, 264605, 264762, 264766, 264768, 264689	
1013	86095772 (2025, 2026)			UNCLASSIFIED	264591, 21906768	
1014	86608828 (2027, 2028)				29331824, 265019, 265020	

1015	95418878 (2028, 2030)	Novel Protein sim. GBank gij4159895 (AF063095) - SELIL (Mus musculus)	Contains protein domain (PF000040) - Fibronectin type II domain	struct	22278994, 22278995, 56894075, 22278996, 22278999, 264259, 29331825, 29331828, 264907, 56182435, 264510, 264591, 264593, 60433356, 264594, 55812038, 284758, 21906754, 33657084, 265010, 264600, 265017, 265018, 265019, 18108351, 21906765, 21906768, 21906767, 21906768, 55811957, 265022, 33657023, 65274620, 33657182, 32833986, 18108370, 18108377, 55811576, 35696423, 264630, 22279000, 264565
1016	78559694 (2031, 2032)	Novel Protein sim. GBank gij2506968spjP41407JACPD, ECOLI - ACYL CARRIER PROTEIN PHOSPHODIESTERASE (ACP PHOSPHODIESTERASE)		esterase	264686, 264693
1017	11068213 (2033, 2034)	Novel Protein sim. GBank gij5103943jdbjBAA79259.1] - (AF000059) 802aa long hypothetical oligopeptide-binding protein oppA [Aeropyrum pernix]	Contains protein domain (PF00496) - Bacterial extracellular solute-binding proteins, family 5	transport	264600
1018	80072430 (2035, 2036)	Novel Protein sim. GBank gij4439373jembjCAB39032.1] - (AL034559) predicted using hexExon; MAL3P7.14 (PFC0825w). Hypothetical protein, len: 489 aa [Plasmodium falciparum]			22278996, 29148627, 264563
1019	11703607 (2037, 2038)			UNCLASSIFIED	264686
1020	80234432 (2039, 2040)				264508, 264509, 264512, 264600, 264762, 264769, 264688, 18108370, 264636, 264638, 264486
1021	37036243 (2041, 2042)	Novel Protein sim. GBank gij4633807jgbAAD26859.1]AF12779 - (AF127795) trehalose biosynthetic enzyme TreY [Rhizobium leguminosarum bv. viciae]		synthase	264769
1022	80502627 (2043, 2044)	Novel Protein sim. GBank gij1781230jembjCAB06277] - (Z83867) hypothetical protein Rv3137 [Mycobacterium tuberculosis]	Contains protein domain (PF00459) - Inositol monophosphatase family	phosphatase	35696052, 264508, 265008, 265009, 264769, 18108387, 264563
1023	11389341 (2045, 2046)	Novel Protein sim. GBank gij3777495 (U92083) - calcium transporting ATPase [Pichia angusta]	Contains protein domain (PF00122) - E1-E2 ATPase	ATPase-associated	264593
1024	80057129 (2047, 2048)			UNCLASSIFIED	52646842, 33657402, 33657023, 18108379, 55811576, 264631, 264556, 284557, 264559, 18108388, 264566
1025	79644200 (2048, 2050)	Novel Protein sim. GBank gij3483045jembjCAA20556] - (AL031371) putative transport system permease protein [Streptomyces coelicolor]		transport	264693
1026	80025946 (2051, 2052)	Novel Protein sim. GBank gij1174922jspjQ02322]UVRD_HAEIN - DNA HELICASE II		helicase	264602
1027	17659234 (2053, 2054)	Novel Protein sim. GBank gij4757728jrefjNP_004886.1]pAGTA - angiotensin/vasopressin receptor AII/AVP-like		UNCLASSIFIED	265017

1028	20297828 (2055, 2056)	Novel Protein sim. GBank gij2791409[embjCAA16003] - (AL021184) acn [Mycobacterium tuberculosis]	Contains protein domain (PF00330) - Aconitase family (aconitate hydratase)	UNCLASSIFIED	264600
1029	94665090 (2057, 2058)			UNCLASSIFIED	264595
1030	88095343 (2059, 2060)			UNCLASSIFIED	264907, 264908, 264510, 264512, 265009, 265010, 265011, 264600, 264602, 264603, 264605, 264769, 18108372, 18108374
1031	95289117 (2061, 2062)			UNCLASSIFIED	264905, 264906, 264909, 264595, 264692, 264630, 264634, 264638
1032	94673275 (2063, 2064)	Novel Protein sim. GBank gij4503895[refjNP_000145.1]pGALK - galactokinase 1		UNCLASSIFIED	264689
1033	86464818 (2065, 2066)	Novel Protein sim. GBank gij2982990 (AE000682) - hypothetical protein [Aquifex aeolicus]		UNCLASSIFIED	35896052, 264908, 264510, 18108354, 264687, 264769, 264689, 60431602, 18108385, 264486
1034	78245937 (2067, 2068)	Novel Protein sim. GBank gij405885 (U000007) - methionyl-tRNA synthetase [Escherichia coli]		UNCLASSIFIED	264906
1035	79956355 (2069, 2070)			UNCLASSIFIED	264692
1036	85804998 (2071, 2072)			UNCLASSIFIED	264905, 66712502, 264908, 264766
1037	87896058 (2073, 2074)			UNCLASSIFIED	29331824, 264909, 60433438, 265019
1038	20481015 (2075, 2076)	Novel Protein sim. GBank gij780819 (L39891) - polycystic kidney disease-associated protein [Homo sapiens]	Contains protein domain (PF01477) - PLAT/LH2 domain		264604, 264634
1039	87260021 (2077, 2078)	Novel Protein sim. GBank gij2605967 (AF030027) - 24 [Equine herpesvirus 4]		UNCLASSIFIED	264092, 264093, 264094, 264683, 264689, 263987
1040	80026840 (2079, 2080)	Novel Protein sim. GBank gij2352095 (U97022) - DNA topoisomerase I [Fenoldobacterium islandicum]	Contains protein domain (PF01131) - Prokaryotic DNA topoisomerase	isomerase	264595
1041	10156682 (2081, 2082)	Novel Protein sim. GBank gij3256535[idbjBAA29218.1] - (AP000001) 301aa long hypothetical 2-phosphoglycerate kinase [Pyrococcus horikoshii]		kinase	264907
1042	11084375 (2083, 2084)	Novel Protein sim. GBank gij2058299[embjCAA66953] - (X98309) ARI protein [Drosophila melanogaster]			264605
1043	80057136 (2085, 2086)	Novel Protein sim. GBank gij1870167[embjCAA70125] - (Y08921) msik [Streptomyces reliculi]	Contains protein domain (PF00005) - ABC transporter	transport	264565, 264567
1044	80025952 (2087, 2088)			UNCLASSIFIED	265006, 264602, 265017
1045	52415482 (2089, 2090)	Novel Protein sim. GBank gij568890[embjCAB52053.1] - (AL109732) hypothetical protein [Streptomyces coelicolor A3(2)]			29331825, 264637
1046	11754862 (2091, 2092)	Novel Protein sim. GBank gij854065[embjCAA58337] - (X83413) U88 [Human herpesvirus 6]		helicase	264686
1047	37036258 (2093, 2094)	Novel Protein sim. GBank gij4210471[idbjBAA74535.1] - (AB019033) orfSA [Pseudomonas sp.]		UNCLASSIFIED	264769
1048	78186400 (2095, 2096)	Novel Protein sim. GBank gij3413419[embjCAA20279] - (AL031232) hypothetical protein SC10H5.07 [Streptomyces coelicolor]	Contains protein domain (PF00220) - Neurohypophyseal hormones, N-terminal Domain	UNCLASSIFIED	264687
1049	81755108 (2097, 2098)	Novel Protein sim. GBank gij5051636[gbjAAD38326.1]AF07372 - (AF073727) EH domain-binding mitotic phosphoprotein [Homo sapiens]		UNCLASSIFIED	264905, 264634
1050	79471521 (2099, 2100)			UNCLASSIFIED	264686

1051	80475471 (2101, 2102)			UNCLASSIFIED	18108374, 264769, 265010, 265011, 264601, 265009, 264604, 264605, 264636, 18108351, 264692
1052	82442962 (2103, 2104)	Novel Protein sim. GBank gll3123275lspIP35136 SERA_BACSU - D-3- PHOSPHOGLYCERATE DEHYDROGENASE (PGDH)	Contains protein domain (PF00389) - D-isomer specific 2-hydroxyacid dehydrogenases	dehydrogenase	264508, 264762, 264687, 264486
1053	94851640 (2105, 2106)	Novel Protein sim. GBank gll5441319 emb CAB46717.1 - (AL034396) dJ1158B12.1 (zinc finger, X-linked, duplicated A) [Homo sapiens]			264686, 18108374, 29331824, 83373044, 21908754, 52645156, 56182435, 264689, 29331827, 27486281, 35698052, 21908765, 35698423, 21908768, 56182575, 21908769, 55811957, 87168518, 35696286, 22278997, 265020, 265011, 265021, 265022, 265007, 265018, 22279000, 22279002, 264482, 264906, 52644150, 264909, 264288, 29331822, 52645080, 264768
1054	79580225 (2107, 2108)	Novel Protein sim. GBank gll5052508 b AAD38584.1 AF14560 - (AF145609) BCDNA_GH02833 [Drosophila melanogaster]	Contains protein domain (PF00270) - DEAD/DEAH box helicase	UNCLASSIFIED helicase	264686
1055	80594138 (2109, 2110)	Novel Protein sim. GBank gll3021676 db BAA25358 - (D86033) RNA polymerase sigma-70 factor [Pseudomonas fluorescens]		rnapiymerase	264906
1056	17882319 (2111, 2112)	Novel Protein sim. GBank gll1226281 (U50308) - No definition line found [Caenorhabditis elegans]		UNCLASSIFIED	264682
1057	85667216 (2113, 2114)	Novel Protein sim. GBank gll170019 sp P46808 GREA_MYCLE - TRANSCRIPTION ELONGATION FACTOR GREA (TRANSCRIPT CLEAVAGE FACTOR GREA)		transcriptfactor	264764
1058	80376576 (2115, 2116)	Novel Protein sim. GBank gll2499087 sp Q09332 UGGG_DROME - UDP- GLUCOSE:GLYCOPROTEIN GLUCOSYLTRANSFERASE PRECURSOR (DUGT)		glycoprotein	35698052, 35695855, 265009, 264636
1059	94662754 (2117, 2118)	Novel Protein sim. GBank gll90254 pir J28334 - protein- tyrosine-phosphatase (EC 3.1.3.48) Ly-5 precursor (B-cell variant) - mouse		phosphatase	29146499, 264681, 264683, 264687
1060	79481169 (2119, 2120)	Novel Protein sim. GBank gll3334200 sp O49954 GCSP_SOLTU - GLYCINE DEHYDROGENASE (DECARBOXYLATING) PRECURSOR (GLYCINE DECARBOXYLASE) (GLYCINE CLEAVAGE SYSTEM P-PROTEIN)		dehydrogenase	264634
1061	11034025 (2121, 2122)	Novel Protein sim. GBank gll249986 sp O41228 PSE1_NICSY - PHOTOSYSTEM I REACTION CENTRE SUBUNIT IV A PRECURSOR (PSI-E A)			264593
1062	39567937 (2123, 2124)	Novel Protein sim. GBank gll82654 pir JJA0086 - 10K zein precursor - maize			264508
1063	8490481 (2125, 2126)	Novel Protein sim. GBank gll249986 sp O41228 PSE1_NICSY - PHOTOSYSTEM I REACTION CENTRE SUBUNIT IV A PRECURSOR (PSI-E A)			265007, 265008, 18108351, 18108385
1064	78891783 (2127, 2128)	Novel Protein sim. GBank gll82654 pir JJA0086 - 10K zein precursor - maize			

1065	80021208 (2128, 2130)	Novel Protein sim. GBank gij212098 pir S70682 - glycosyltransferase homolog - Bordetella pertussis		transferase	264600, 264602, 264689
1066	17896878 (2131, 2132)	Novel Protein sim. GBank gij2508382 sp P15042 DNLJ_ECOLI - DNA LIGASE (POLYDEOXYRIBONUCLEOTIDE SYNTHASE (NAD+))		synthase	265009
1067	10132178 (2133, 2134)				264909
1068	82062057 (2135, 2136)	Novel Protein sim. GBank gij4007669 emb CAA22355 - (AL034443) putative oxidoreductase [Streptomyces coelicolor]	Contains protein domain (PF00248) - Aldo/keto reductase family	reductase	264688, 18108362, 264558, 264600, 264760
1069	83002954 (2137, 2138)	Novel Protein sim. GBank gij4589484 db BAA76770.1 - (AB023143) KIAA0928 protein [Homo sapiens]		UNCLASSIFIED	264604
1070	82101992 (2139, 2140)	Novel Protein sim. GBank gij120304 sp P15932 FLGK_SALTY - FLAGELLAR HOOK-ASSOCIATED PROTEIN 1 (HAP1)		UNCLASSIFIED	264604, 264760
1071	20710569 (2141, 2142)	Novel Protein sim. GBank gij1750397 (U81261) - glutamate synthase large subunit [Pseudomonas aeruginosa]		synthase	264602
1072	82356540 (2143, 2144)			UNCLASSIFIED	264687, 264688, 21908784, 35696052, 35695917, 35695855, 264600, 264601, 264602, 265009, 264605, 264508, 264905, 264690, 264906, 264762, 264828, 264768
1073	79814400 (2145, 2146)				264909
1074	80105992 (2147, 2148)	Novel Protein sim. GBank gij477532 pir A49175 - MotC B protein - mouse (fragment)	Contains protein domain (PF00008) - EGF-like domain	synthase	264906
1075	81850293 (2148, 2150)	Novel Protein sim. GBank gij3893109 emb CAA76940 - (Y17920) CALO protein [Drosophila melanogaster]		UNCLASSIFIED	56994075, 22278998, 264594, 264757, 264596, 265018, 265019, 264681, 264369, 264688, 265020, 18108364, 18108374
1076	80477264 (2151, 2152)	Novel Protein sim. GBank gij1176203 sp P46442 YHGM_ECOLI - HYPOTHETICAL 43.1 KD PROTEIN IN RPLM-HHOA INTERGENIC REGION (F375)		ATPase-associated	264769
1077	79831334 (2153, 2154)	Novel Protein sim. GBank gij4033487 sp Q44472 TUD4_AGRVI - PUTATIVE HYDROXYPYRUVATE REDUCTASE		kinase	264905
1078	20288874 (2155, 2156)			UNCLASSIFIED	264600
1079	80494518 (2157, 2158)	Novel Protein sim. GBank gij3413828 emb CAA20296 - (AL031260) hypothetical protein SC9A10.09 [Streptomyces coelicolor]		UNCLASSIFIED	18108394, 264769, 264634, 264636
1080	11767188 (2159, 2160)			UNCLASSIFIED	264684
1081	94747080 (2161, 2162)				83373044, 265019, 22278002, 264482, 18108351, 264682, 264908, 264693, 264487
1082	81490656 (2163, 2164)			UNCLASSIFIED	264758, 264768, 264769, 21905767, 264511, 264910, 264634, 264635, 264905, 264636, 264906, 264637, 264907, 264908, 264764, 264638, 20281099, 264766, 264595

1083	87446717 (2165, 2166)	Novel Protein sim. GBank gij1722945ispj10523jy01N_MYCTU - HYPOTHETICAL 44.8 KD PROTEIN CY427.23		UNCLASSIFIED	60424179, 264905, 264906, 264510, 60432229, 264759, 87188474, 264605, 264769, 264689, 18108364, 18108376, 35695855, 264636 264769
1084	37799308 (2167, 2168)	Novel Protein sim. GBank gij148384ispj32057jwcal_ecoli - PUTATIVE COLANIC ACID BIOSYNTHESIS GLYCOSYL TRANSFERASE WCAI		UNCLASSIFIED	
1085	86473368 (2169, 2170)	Novel Protein sim. GBank gij1899190 (U90204) - heat shock protein 60 [Tsukamurella tyrosinosolvens]	Contains protein domain (PF00118) - eph TCP-1/cpn60 chaperonin family		60432229, 264687
1086	79608269 (2171, 2172)	Novel Protein sim. GBank gij1172956ispj46176jrl14_ACYKS - 50S RIBOSOMAL PROTEIN L14	Contains protein domain (PF00238) - Ribosomal protein L14	ribosomalprot	264486
1087	79603979 (2173, 2174)	Novel Protein sim. GBank gij14160198jemb CAA154311 - (AL008563) dJ327J16.3 (novel CHROMObox family protein) [Homo sapiens]	Contains protein domain (PF00385) - 'chromo' (CHROMatin Organization Modifier) domain	helicase	29331827, 264693
1088	79854963 (2175, 2176)	Novel Protein sim. GBank gij2983155 (AE000693) - phosphoglucosyltransferase/phosphomannomutase [Aquifex aeolicus]		UNCLASSIFIED	264905, 264601, 18108387
1089	80216800 (2177, 2178)	Novel Protein sim. GBank gij14981768jba AAD36290.1 AE001778 - (AE001778) NADH dehydrogenase, 30 kDa subunit, putative [Thermotoga maritima]	Contains protein domain (PF00329) - Respiratory-chain NADH dehydrogenase, 30 kDa subunit	UNCLASSIFIED	264488, 264511, 265011, 264682, 264768, 264689, 21906764, 35695917, 265020, 32833986, 18108370, 35695855
1090	11083825 (2179, 2180)	Novel Protein sim. GBank gij4007680jemb CAA223661 - (AL034443) putative oxidoreductase [Streptomyces coelicolor]			264604
1091	12917471 (2181, 2182)	Novel Protein sim. GBank gij2495562ispj77239jyLCD_ECOLI - HYPOTHETICAL 44.3 KD PROTEIN IN NFRB-PHEP INTERGENIC REGION PRECURSOR		UNCLASSIFIED	264637
1092	80252286 (2183, 2184)	Novel Protein sim. GBank gij2980098jemb CAA17996.1 - (AL022121) ntl [Mycobacterium tuberculosis]	Contains protein domain (PF00730) - Endonuclease III	nuclease	264566 264769, 35695917, 35695855, 264600, 264602, 264603, 264605, 18108351
1093	80496304 (2185, 2186)	Novel Protein sim. GBank gij1001642jdbj BAA10373 - (D64002) dGTP triphosphohydrolase [Synechocystis sp.]	UNCLASSIFIED		264686
1094	10880972 (2187, 2188)	Novel Protein sim. GBank gij4585587jemb CAB40855.1 - (AL049628) putative adenine glycosylase [Streptomyces coelicolor]	Contains protein domain (PF00455) - Bacterial regulatory proteins, deoR family	nuclease	264906, 265007, 264595, 264600, 264602, 264603, 264604, 264605, 264762, 264768, 264769, 264636, 264558, 18108387, 60432113, 264482, 264486
1095	87457250 (2189, 2190)	Novel Protein sim. GBank gij15001ispj19206jbiob_BACSH - BIOTIN SYNTHASE (BIOTIN SYNTHETASE)		synthase	264600, 264602, 264603, 264604, 264605, 35695917, 264692, 264631
1096	80025977 (2191, 2192)	Novel Protein sim. GBank gij114135ispj08205jarga_ecoli - AMINO-ACID ACETYLTRANSFERASE (N-ACETYLGLUTAMATE SYNTHASE) (AGS)		UNCLASSIFIED	265019 264687
1097	79239560 (2193, 2194)	Novel Protein sim. GBank		synthase	
1098	79186424 (2195, 2196)	Novel Protein sim. GBank			

1099	39523838 (2197, 2198)	Novel Protein sim. GBank gi 3915144 sp O33017 TRMD_MYCLE - TRNA (GUANINE- N1)-METHYLTRANSFERASE (MIG- METHYLTRANSFERASE) (TRNA [GM37] METHYLTRANSFERASE)			UNCLASSIFIED	264603
1100	65736571 (2199, 2200)	Novel Protein sim. GBank gi 3023255 sp O64420 JACOD_MESAU - ACYL-COA DESATURASE (STEAROYL-COA DESATURASE) (FATTY ACID DESATURASE) (DELTA(9)-DESATURASE)			desaturase	264259, 264636
1101	60491857 (2201, 2202)	Novel Protein sim. GBank gi 1174735 sp P43012 TOP1_HAEIN - DNA TOPOISOMERASE I (OMEGA-PROTEIN) (RELAXING ENZYME) (UNTWISTING ENZYME) (SWIVELASE)	Contains protein domain (PF01396) - Topoisomerase DNA binding C4 zinc finger		isomerase	264769
1102	79777614 (2203, 2204)	Novel Protein sim. GBank gi 1906596 (U81788) - kinesin-73			UNCLASSIFIED	264910, 264909
1103	81897259 (2205, 2206)	[Drosophila melanogaster]			struct	264757
1104	95003115 (2207, 2208)	Novel Protein sim. GBank gi 2935448 (AF048976) - synaptic ras GTPase-activating protein p135 SynGAP [Rattus norvegicus]			UNCLASSIFIED	29331822, 21906754, 264555, 264556, 264558, 22278002
1105	80255121 (2209, 2210)					264566
1106	79314110 (2211, 2212)				UNCLASSIFIED	264555, 264389
1107	80470019 (2213, 2214)					264906, 264769
1108	80440616 (2215, 2216)	Novel Protein sim. GBank gi 1173421 sp P43416 SECY_STRSC - PREPROTEIN TRANSLOCASE SECY SUBUNIT			transport	264907, 264510, 264511, 264600, 264602, 264605, 264768, 264769
1109	80064615 (2217, 2218)	Novel Protein sim. GBank gi 2995310 emb CAA18338 - (AL022268) putative ATP-dependent helicase [Streptomyces coelicolor]			helicase	264602, 264605, 264636
1110	80503554 (2219, 2220)					264908, 264593, 265010, 264601, 264603, 264604, 264605, 264682, 264769, 264693, 264636
1111	80071744 (2221, 2222)	Novel Protein sim. GBank gi 2622039 (AE000868) - type I restriction modification system, subunit S [Methanobacterium thermoautotrophicum]				18108370, 264557
1112	95010088 (2223, 2224)	Novel Protein sim. GBank gi 3218376 emb CAA19628 - (AL023862) putative oxidoreductase [Streptomyces coelicolor]			UNCLASSIFIED	264908
1113	82456352 (2225, 2226)					264600, 264602, 264604, 264605, 264762, 264769, 264565
1114	14988014 (2227, 2228)	Novel Protein sim. GBank gi 1083428 pir J554876 - NAD(P)+ transhydrogenase (B-specific) (EC 1.6.1.1) precursor - mouse			dehydrogenase	264636
1115	11765583 (2229, 2230)					264686
1116	79841152 (2231, 2232)				UNCLASSIFIED	264908

1117	95305465 (2233, 2234)	Novel Protein sim. GBank gij3255865[embjCAA94089] - (Z70200) U5 snRNP-specific 200KD protein [Homo sapiens]	Contains protein domain (PF00270) - DEAD/DEAH box helicase	helicase	18108392, 264488, 263994, 264489, 18108398, 56182575, 22278995, 22278996, 35696286, 56994075, 22278997, 22278998, 22278999, 264259, 29331822, 56182181, 29331824, 66714117, 29331825, 29331826, 60432289, 29331827, 29331828, 35696052, 33656970, 29146498, 264508, 264905, 264509, 264906, 264907, 264908, 66712502, 264909, 52644045, 56182435, 264510, 264511, 265008, 265007, 264512, 265008, 265009, 264910, 60170831, 264591, 264592, 264593, 60433356, 264594, 60433438, 264595, 55812038, 264596, 264758, 264759, 21906754, 33109854, 33657084, 265011, 87168559, 264600, 264601, 264602, 264603, 265017, 264604, 265018, 264605, 265019, 264760, 55811150, 264681, 264762, 18108351, 264448, 264682, 264784, 264683, 264288, 264369, 264684, 264685, 264766, 264767, 264886, 264687, 264768, 264769, 264688, 18108359, 264689, 21906765, 21908766, 21908767, 21906768, 21908769, 55811957, 29148784, 35695917, 265020, 265021, 265022, 60170815, 264690, 264691, 33657023, 264692, 264693, 65274620, 33657109, 33657182, 27486261, 27486262, 27486264, 33657349, 27486265, 35695763, 264691
1118	79563326 (2235, 2236)			UNCLASSIFIED	264691
1119	79842463 (2237, 2238)			UNCLASSIFIED	264907
1120	79480463 (2239, 2240)	Novel Protein sim. GBank gij5420387[embjCAB46679.1] - (A243459) proteophosphoglycan [Leishmania major]		collagen	29331827, 265018, 265019, 264681, 265021, 60170815, 18108387
1121	79471716 (2241, 2242)	Novel Protein sim. GBank gij1644450 (U67864) - MEX-3 [Caenorhabditis elegans]	Contains protein domain (PF00013) - KH domain	UNCLASSIFIED	264683, 264632, 18108388
1122	79456246 (2243, 2244)			UNCLASSIFIED	264639, 264563
1123	79637119 (2245, 2246)	Novel Protein sim. GBank gij98800[pil][S17768 - 3-dehydroquinase synthase (EC 4.6.1.3) - Mycobacterium tuberculosis]		synthase	264693, 27486265
1124	79811596 (2247, 2248)			UNCLASSIFIED	264909
1125	79757861 (2249, 2250)			UNCLASSIFIED	264910
1126	79758914 (2251, 2252)	Novel Protein sim. GBank gij138154[spjP03643]VGG_BPPHX - MAJOR SPIKE PROTEIN (G PROTEIN) (GPG)		eph	264905, 264909, 264910
1127	11800930 (2253, 2254)			UNCLASSIFIED	264682
1128	8364885 (2255, 2256)	Novel Protein sim. GBank gij5002704[embjCAB44358.1] - (A242630) DNA polymerase I [Methylobacterium sp. DMA]	Contains protein domain (PF00476) - DNA polymerase family A	UNCLASSIFIED	264511

1129	80422480 (2237, 2256)	Novel Protein sim. GBank gii5689485[dbj]BAA83026.1] - (AB028997) KIAA1074 protein [Homo sapiens]	Contains protein domain (PF00170) - bZIP transcription factor	UNCLASSIFIED	265011, 264766
1130	78420151 (2259, 2260)	Novel Protein sim. GBank	UNCLASSIFIED	264595	
1131	80055391 (2261, 2262)	gi4981328[gb]AAC35881.1(AE00174 - (AE001747) bioY protein [Thermotoga maritima]	UNCLASSIFIED	35696286, 22278998, 20331828, 264603, 264605, 264559	
1132	82062248 (2263, 2264)	Novel Protein sim. GBank gii1841552 (U89336) - unknown [Homo sapiens]	UNCLASSIFIED	22278998, 264906, 265009, 264600, 264602, 264604, 264605, 264760, 32833986, 18108374	
1133	17280437 (2265, 2266)		UNCLASSIFIED	265018	
1134	80235376 (2267, 2268)		UNCLASSIFIED	264512, 264534	
1135	80029393 (2269, 2270)	Novel Protein sim. GBank gii4539171[emb]CAB39700.1] - (AL049485) conserved hypothetical protein [Streptomyces coelicolor]		264508, 264600, 264602, 264603, 18108376	
1136	79842052 (2271, 2272)	Novel Protein sim. GBank gii4982454[gb]AAD36931.1(AE00182 - (AE001823) ATP-dependent protease LA, putative [Thermotoga maritima]	UNCLASSIFIED	264906, 264908	
1137	80931557 (2273, 2274)	Novel Protein sim. GBank gii4972746[gb]AAD34768.1] - (AF132180) unknown [Drosophila melanogaster]	Contains protein domain (PF00515) - collagen TPR Domain	22278998, 22278999, 35696052, 264907, 265009, 60433356, 264596, 265010, 264448, 264682, 264767, 264689, 265020, 264692, 55811578, 35695855, 284631, 284632, 22279002	
1138	79841163 (2275, 2276)	Novel Protein sim. GBank gii731807[sp]P38739[YHC8 YEAST - HYPOTHETICAL 63.8 KD PROTEIN IN GUT1-RIM1 INTERGENIC REGION PRECURSOR	strud	264908	
1139	79633561 (2277, 2278)	Novel Protein sim. GBank gii3650031 (AC005396) - putative proline-rich cell wall protein [Arabidopsis thaliana]	UNCLASSIFIED	264693	
1140	39480358 (2279, 2280)		UNCLASSIFIED	264593	
1141	79638019 (2281, 2282)		UNCLASSIFIED	265019, 264693	
1142	19635848 (2283, 2284)		UNCLASSIFIED	264631	
1143	87762156 (2285, 2286)	Novel Protein sim. GBank gii3928000[emb]CAA05880] - (AJ003125) procollagen I N-proteinase [Homo sapiens]	Contains protein domain (PF00090) - oxidase Thrombospondin type 1 domain	56182575, 264908, 264600, 264632, 87168518	
1144	80088988 (2287, 2288)		UNCLASSIFIED	264635, 264636, 264907, 264593, 264908, 264566, 264909	
1145	14610262 (2289, 2290)		UNCLASSIFIED	264112	
1146	82062092 (2291, 2292)		UNCLASSIFIED	264769, 264689, 35696286, 264760, 264905, 264486, 264559	
1147	80071761 (2293, 2294)	Novel Protein sim. GBank	kinase	264557	
1148	80048433 (2295, 2296)	gi2499003[sp]P76422[THID_ECOLI - PHOSPHOMETHYLPIRIMIDINE KINASE (HMP- PHOSPHATE KINASE) (HMP-P KINASE)		264591	
1149	11607438 (2297, 2298)	Novel Protein sim. GBank gii2898734[emb]CAA17213.1] - (AL021897) hypothetical protein Rv1097c [Mycobacterium tuberculosis]		264591	

1150	81325074 (2299, 2300)	Novel Protein sim. GBank gij4324655jgb AAD16978 - E1-E2 ATPase [Mus musculus]			ATPase-associated	264488, 35696286, 264907, 264908, 264909, 264910, 264593, 264596, 264758, 264764, 264766, 264768, 264693, 264628, 60431850, 264564, 264566, 264567, 264595
1151	80070874 (2301, 2302)	Novel Protein sim. GBank gij4324655jgb AAD16978 - (AF108191) DNA polymerase III alpha subunit [Streptomyces coelicolor]			polymerase	
1152	80235547 (2303, 2304)	Novel Protein sim. GBank gij3874275jemb CA807311.1 - (Z92825) predicted using GeneFinder: Similarity to Yeast low affinity glucose transporter HXT4 (PS:32467); cDNA EST EMBL:C12555 comes from this gene; cDNA EST yk404c10.3 comes from this gene; cDNA EST yk404c10.5 comes from thi...			glycoprotein	264488, 22278998, 264905, 264629, 264486
1153	80027783 (2305, 2306)	Novel Protein sim. GBank gij4240315 dbj BAA74936.1 - (AB020720) KIAA0913 protein [Homo sapiens]			UNCLASSIFIED	264910, 264555, 264557, 265008
1154	83002995 (2307, 2308)				UNCLASSIFIED	264630
1155	79411098 (2309, 2310)	Novel Protein sim. GBank gij586655jgb P37617 ATZN, ECOLI - ZINC-TRANSPORTING ATPASE (ZINC(II)-TRANSLLOCATING P-TYPE ATPASE)		Contains protein domain (PF00122) - E1-E2 ATPase		
1156	57147843 (2311, 2312)	Novel Protein sim. GBank gij418480jgb P32139 YIHR, ECOLI - HYPOTHETICAL 34.0 KD PROTEIN IN GLNA-RBN INTERGENIC REGION			UNCLASSIFIED	264906, 264907, 264758, 264768, 264769, 264689, 264638, 264566
1157	95287711 (2313, 2314)	Novel Protein sim. GBank gij2486481jgb Q50724 Y09S_MYCTU - HYPOTHETICAL 87.3 KD PROTEIN CY78.27C				264906, 264762, 264687, 264769, 264689, 18108374, 35695855
1158	82454917 (2315, 2316)	Novel Protein sim. GBank gij2486481jgb Q50724 Y09S_MYCTU - HYPOTHETICAL 87.3 KD PROTEIN CY78.27C				264687
1159	78186451 (2317, 2318)	Novel Protein sim. GBank gij1138406 dbj BAA11490 - (D79995) similar to pig tubulin-tyrosine ligase. [Homo sapiens]				29331822, 29331824, 66714117, 29331826, 60433356, 265018, 265019, 83373044, 18108385, 22279000, 22279002, 264563
1160	91229883 (2319, 2320)					264369
1161	7417143 (2321, 2322)	Novel Protein sim. GBank gij2443342 dbj BAA22380 - (D88764) alpha 2 type I collagen [Rana catesbeiana]			UNCLASSIFIED	264693
1162	79635357 (2323, 2324)	Novel Protein sim. GBank gij4503375 ref NP_001376.1 pDPYS - dihydropyrimidinase			UNCLASSIFIED	29331827, 264906
1163	79563186 (2325, 2326)	Novel Protein sim. GBank gij5052554jgb AAD38607.1 AF145632 - (AF145632) BcDNA GH06032 [Drosophila melanogaster]			transport	18108398, 29331827, 29331828, 29146498, 29146499, 18108354, 21906768, 29148827, 21908769, 264693, 18108382, 18108385
1164	79650829 (2327, 2328)	Novel Protein sim. GBank gij5052554jgb AAD38607.1 AF145632 - (AF145632) BcDNA GH06032 [Drosophila melanogaster]			UNCLASSIFIED	264602, 264605, 264769, 18108370, 18108374, 264565
1165	80481888 (2329, 2330)					264488, 35696286, 22278998, 264259, 66714117, 60432289, 35696052, 264905, 56182435, 265006, 60433438, 264759, 21908754, 33109954, 265017, 265019, 264448, 264288, 264766, 264685, 35696423, 35695855, 264558, 18108385, 60432113
1166	88096456 (2331, 2332)	Novel Protein sim. GBank gij4589476 dbj BAA76766.1 - (AB023139) KIAA0922 protein [Homo sapiens]				

1167	79963882 (2333, 2334)	Novel Protein sim. GBank gij2580433[dbj BAA23138] - (D76414) ppGpp hydrolase [Staphylococcus aureus]		kinase	264488
1168	88084678 (2335, 2336)			UNCLASSIFIED	264259, 29331827, 56182435, 60433438, 265019, 33657023, 35695855, 264566
1169	11805403 (2337, 2338)			UNCLASSIFIED	264681
1170	21632244 (2339, 2340)			UNCLASSIFIED	264602
1171	20434582 (2341, 2342)			UNCLASSIFIED	264556
1172	78610113 (2343, 2344)	Novel Protein sim. GBank gij2772814 (AF029249) - precollagen D [Mytilus edulis] Novel Protein sim. GBank gij4757846[ref NP_004317.1 pBCL9 - B-cell CLL/lymphoma 9		UNCLASSIFIED	55810764, 35696052, 264634, 264486
1173	80235713 (2345, 2346)	Novel Protein sim. GBank gij2564053[dbj BAA22946] - (AB007832) Bm trachealless [Bombyx mori]			264508, 264906, 264907, 264909, 264591, 264632, 264638, 264639
1174	20293077 (2347, 2348)	Novel Protein sim. GBank gij2911027[emb CAA17520] - (AL021958) mmsA [Mycobacterium tuberculosis]		dehydrogenase	264600
1175	20711847 (2349, 2350)	Novel Protein sim. GBank gij118333[sp P23234 DCIP_ENTCL - INDOLE-3-PYRUVATE DECARBOXYLASE (INDOLEPYRUVATE DECARBOXYLASE)	Contains protein domain (PF00205) - Thiamine pyrophosphate enzymes	carboxylase	264601
1176	80252845 (2351, 2352)	Novel Protein sim. GBank gij1144520 (U34956) - phosphoribosylformylglycinamide synthase [Mycobacterium tuberculosis]	Contains protein domain (PF00586) - AIR synthase related protein	synthase	264509, 264805, 264593, 264602, 264605
1177	80064647 (2353, 2354)	Novel Protein sim. GBank gij119791[sp P28643 FABG_CUPLA - 3-OXOACYL-(ACYL-CARRIER PROTEIN) REDUCTASE PRECURSOR (3-KETOACYL-ACYL CARRIER PROTEIN REDUCTASE)	Contains protein domain (PF00106) - short chain dehydrogenase	reductase	264605
1178	94128641 (2355, 2356)	Novel Protein sim. GBank gij5031697[ref NP_005594.1 pFIC1 - familial intrahepatic cholestasis 1, (progressive, Byler disease and benign recurrent)	Contains protein domain (PF00122) - E1-E2 ATPase	ATPase-associated	65274572, 18108398, 22278998, 22278999, 29331828, 264508, 264808, 264828, 33657402, 33109954, 264769, 21908765, 21908786, 21908768, 55811957, 33657023, 264629, 55811576, 35698423, 264636, 264556, 56182323, 60432113, 22279000, 22279002
1179	80055575 (2357, 2358)	Novel Protein sim. GBank gij2960090[emb CAA17988.1] - (AL022121) dppA [Mycobacterium tuberculosis]	Contains protein domain (PF00496) - Bacterial extracellular solute-binding proteins, family 5	transport	264603
1180	11794446 (2359, 2360)	Novel Protein sim. GBank gij2558614[emb CAA04787] - (AJ001493) dehydroquinolate dehydratase [Streptomyces coelicolor]	Contains protein domain (PF01220) - Dehydroquinase class II	synthase	264638
1181	17846362 (2361, 2362)			UNCLASSIFIED	265017
1182	81494264 (2363, 2364)	Novel Protein sim. GBank gij5420387[emb CAB46679.1] - (AJ243459) proteophosphoglycan [Leishmania major]			265007, 265009, 264584, 264909, 264693
1183	79574044 (2365, 2366)				264689, 35696423, 264638, 18108385
1184	52559933 (2367, 2368)	Novel Protein sim. GBank gij4091877 (AF061331) - alpha galactosidase precursor [Saccharopolyspora erythraea]		UNCLASSIFIED	264602
1185	79491185 (2369, 2370)	Novel Protein sim. GBank gij2129478[pir S51939 - chitinase (EC 3.2.1.14) precursor - beet		glycoprotein	263967

1186	20224012 (2371, 2372)			UNCLASSIFIED	264559
1187	78248834 (2373, 2374)			UNCLASSIFIED	29331825, 265017, 18108351
1188	79831387 (2375, 2376)	Novel Protein sim. GBank gjl2986039 (AF054525) - hypothetical protein [Synecoccus PCC7002]		UNCLASSIFIED	264905, 264906
1189	78609367 (2377, 2378)				264692
1190	78930589 (2379, 2380)			UNCLASSIFIED	265018
1191	80310105 (2381, 2382)			UNCLASSIFIED	264600, 264605, 264764, 35695855, 264638, 264486
1192	13521641 (2383, 2384)		Contains protein domain (PF01581) - FMRFamide related peptide family		264636
1193	11103584 (2385, 2386)			UNCLASSIFIED	263978
1194	78893947 (2387, 2388)	Novel Protein sim. GBank gjl854065(emb)CAA58337 - (X83413) U88 [Human herpesvirus 6]		UNCLASSIFIED	265007, 265008
1195	20445442 (2389, 2390)	Novel Protein sim. GBank gjl1790277 (AE000459) - putative oxidoreductase [Escherichia coli]		UNCLASSIFIED	264605
1196	13000688 (2391, 2392)				264689
1197	11392317 (2393, 2394)	Novel Protein sim. GBank gjl2497360(ssl)Q50715(IMDH, MYCTU - INOSINE 5'-MONOPHOSPHATE DEHYDROGENASE (IMP DEHYDROGENASE) (IMPDH) (IMPD)	Contains protein domain (PF00571) - CBS domain		264594
1198	95290101 (2395, 2396)				264603
1199	81882011 (2397, 2398)	Novel Protein sim. GBank gjl1709525(ssl)P54673(P3K1, DICD1 - PHOSPHATIDYLINOSITOL 3-KINASE 1 (PI3-KINASE) (PTDINS-3-KINASE) (PI3K)			264259, 264757, 33109954, 21906768
1200	9848880 (2398, 2400)			UNCLASSIFIED	264910
1201	80503751 (2401, 2402)	Novel Protein sim. GBank gjl2499877(ssl)P70645(BLMH_RAT - BLEOMYCIN HYDROLASE (BLM HYDROLASE) (BMH)	cathepsin		264766, 264769
1202	80082633 (2403, 2404)	Novel Protein sim. GBank gjl606342 (U18987) - ORF_0622; reading frame open far upstream of start; possible frameshift, linking to previous ORF [Escherichia coli]	ribosomalprot		264600, 264558
1203	82125373 (2405, 2406)			UNCLASSIFIED	264768, 264769, 35695917, 264910, 264760, 264906, 264907, 264629, 264908, 264909, 264766
1204	80503916 (2407, 2408)	Novel Protein sim. GBank gjl2500728(ssl)Q59912(SECY_STRGB - PREPROTEIN TRANSLOCASE SECY SUBUNIT			264905, 264769, 264636
1205	80053861 (2409, 2410)			UNCLASSIFIED	264566
1206	80241985 (2411, 2412)			UNCLASSIFIED	264556, 264557, 264558
1207	78841192 (2413, 2414)				29331824, 264909, 265021, 18108370
1208	87755217 (2415, 2416)	Novel Protein sim. GBank gjl2645560 (AF027954) - Bcl-2 related ovarian killer protein [Rattus norvegicus]	Contains protein domain (PF00452) - apoptosis		29331824, 29331825, 29331827, 265007, 264764, 264683, 264769, 264688, 264689

1209	79185742 (2417, 2418)	Novel Protein sim. GBank gi 1175033 sp P44398 XYLA_HAEIN - XYLOSE ISOMERASE	Contains protein domain (PF00259) - Xylose isomerase	isomerase	264687, 264688
1210	56428884 (2419, 2420)	Novel Protein sim. GBank gi 1175033 sp P44398 XYLA_HAEIN - XYLOSE ISOMERASE		UNCLASSIFIED	264907, 264693
1211	94665855 (2421, 2422)	Novel Protein sim. GBank gi 1175033 sp P44398 XYLA_HAEIN - XYLOSE ISOMERASE		transferase	264591, 264592, 264595
1212	79167929 (2423, 2424)	Novel Protein sim. GBank gi 1175033 sp P44398 XYLA_HAEIN - XYLOSE ISOMERASE	Contains protein domain (PF01412) - Putative GTP-ase activating protein for Arf		264689, 263967
1213	79859633 (2425, 2426)	Novel Protein sim. GBank gi 1175033 sp P44398 XYLA_HAEIN - XYLOSE ISOMERASE		kinase	264909
1214	10144306 (2427, 2428)	Novel Protein sim. GBank gi 1175033 sp P44398 XYLA_HAEIN - XYLOSE ISOMERASE		UNCLASSIFIED	264908
1215	80050106 (2429, 2430)	Novel Protein sim. GBank gi 1175033 sp P44398 XYLA_HAEIN - XYLOSE ISOMERASE		UNCLASSIFIED	265009, 264601, 264602, 264603, 33657109
1216	20438324 (2431, 2432)	Novel Protein sim. GBank gi 1175033 sp P44398 XYLA_HAEIN - XYLOSE ISOMERASE		transferase	264604
1217	95011344 (2433, 2434)	Novel Protein sim. GBank gi 1175033 sp P44398 XYLA_HAEIN - XYLOSE ISOMERASE		UNCLASSIFIED	264905, 264907, 264908, 264591, 264766, 264691, 264693, 264629, 264630, 264636, 264564
1218	11093680 (2435, 2436)	Novel Protein sim. GBank gi 1175033 sp P44398 XYLA_HAEIN - XYLOSE ISOMERASE		dehydrogenase	264601
1219	91216252 (2437, 2438)	Novel Protein sim. GBank gi 1175033 sp P44398 XYLA_HAEIN - XYLOSE ISOMERASE			56181686, 29331822, 60432289, 264601, 264692, 264629
1220	91241524 (2439, 2440)	Novel Protein sim. GBank gi 1175033 sp P44398 XYLA_HAEIN - XYLOSE ISOMERASE		oncogene	52644507, 264905, 264909, 265008, 265019, 265020, 52644150, 33657023, 264693, 33657182, 35695763, 264634, 22279000, 22279002, 264482
1221	83045055 (2441, 2442)	Novel Protein sim. GBank gi 1175033 sp P44398 XYLA_HAEIN - XYLOSE ISOMERASE		UNCLASSIFIED	264766, 265020, 264906
1222	20711865 (2443, 2444)	Novel Protein sim. GBank gi 1175033 sp P44398 XYLA_HAEIN - XYLOSE ISOMERASE	Contains protein domain (PF00486) - Transcriptional regulatory protein, C terminal	phosphatase	264601
1223	11615647 (2445, 2446)	Novel Protein sim. GBank gi 1175033 sp P44398 XYLA_HAEIN - XYLOSE ISOMERASE			264593
1224	80432845 (2447, 2448)	Novel Protein sim. GBank gi 1175033 sp P44398 XYLA_HAEIN - XYLOSE ISOMERASE	Contains protein domain (PF01472) - PUA domain	kinase	264593, 264600, 264601, 264603, 264605, 264766, 18108376, 264635, 18108387

1225	80434427 (2449, 2450)	Novel Protein sim. GBank gij2105050[embjCAB08836] - (Z95436) hypothetical protein Rv3644c [Mycobacterium tuberculosis]			polymerase	264768 264905, 264512, 264689
1226	80237518 (2451, 2452)	Novel Protein sim. GBank gij1706768[spP98133]FBN1_BOVIN - FIBRILLIN 1 PRECURSOR (MP340)			UNCLASSIFIED	264808, 264637, 264639
1227	78422138 (2453, 2454)	Novel Protein sim. GBank gij1653801[dbjBAA18811] - (D90917) acriflavine resistance protein [Synecococcus sp.]		Contains protein domain (PF00873) - AcrB/AcrD/AcrF family	UNCLASSIFIED	264605, 264634
1228	78209027 (2455, 2456)	Novel Protein sim. GBank gij116230[spP28598]CH60_BACSU - 60 KD CHAPERONIN (PROTEIN CPN60) (GROEL PROTEIN)		Contains protein domain (PF00118) - TCP-1/cpn60 chaperonin family	UNCLASSIFIED	87168474, 265011, 87168559, 264681, 264689, 264693, 65274620, 18108374
1229	94329135 (2457, 2458)	Novel Protein sim. GBank gij1215733 (U48718) - OphC [Agrobacterium tumefaciens]			UNCLASSIFIED	264908 264909
1230	80049357 (2459, 2460)	Novel Protein sim. GBank gij118298[spP20730]CHC_BOMMO - CHORION CLASS HIGH-CYSTEINE HCB PROTEIN 13 PRECURSOR (HC-B.13)			UNCLASSIFIED	265017, 264564
1231	79843141 (2461, 2462)	Novel Protein sim. GBank gij129671[spP40280]H2A_MAIZE - HISTONE H2A		Contains protein domain (PF00125) - Core histone H2A/H2B/H3/H4	histone	265008, 265010, 18108381
1232	79853104 (2463, 2464)	Novel Protein sim. GBank gij3875133[embjCAA94750] - (Z70750) similar to actin binding domain; cDNA EST EMBL: T00093 comes from this gene; cDNA EST EMBL: D34443 comes from this gene; cDNA EST EMBL: D37508 comes from this gene; cDNA EST EMBL: D84247 comes from this gene; cDNA EST EMBL: protein-coupled receptor LGR4 [Rattus norvegicus]			UNCLASSIFIED	264634, 264762 265018, 55811150, 264565, 264757 264758, 264601, 264766, 264687, 18108372, 264555, 264559
1233	80255179 (2465, 2466)	Novel Protein sim. GBank gij4007990[gbjAAC95339] - (AF084363) DOK protein [Mus musculus]		Contains protein domain (PF00560) - Leucine Rich Repeat	glycoprotein	264259, 28331822, 28331824, 35696052, 264508, 264906, 52644045, 52646317, 264288, 264769, 264693, 264632, 264634, 264558, 87168518, 264563
1234	79242158 (2467, 2468)	Novel Protein sim. GBank gij1176192[spP45420]HCD_ECOLI - HYPOTHETICAL OUTER MEMBRANE USHER PROTEIN IN GLTF-NANT INTERGENIC REGION PRECURSOR			oncogene	264509, 264511, 264759, 264760, 264764, 264557 264769
1235	79914423 (2469, 2470)	Novel Protein sim. GBank gij121383[spP18904]GLNA_VIBAL - GLUTAMINE SYNTHETASE [GLUTAMATE-AMMONIA LIGASE]		Contains protein domain (PF00120) - Glutamine synthetase	UNCLASSIFIED	264601, 264604, 264638
1236	81927147 (2471, 2472)					
1237	83371782 (2473, 2474)					
1238	87411577 (2475, 2476)					
1239	82197449 (2477, 2478)					
1240	80497259 (2479, 2480)					
1241	80020711 (2481, 2482)					
1242	79775890 (2483, 2484)					264906, 264907, 264908, 264634

1243	79779458 (2485, 2486)	Novel Protein sim. GBank gij3355671[emb]CAA19971] - (AL031124) branched-chain amino acid aminotransferase [Streptomyces coelicolor]		UNCLASSIFIED	18108374, 35695917, 35695855, 265009, 264508, 264909
1244	10284821 (2487, 2488)	Novel Protein sim. GBank gij2970646 (AF051945) - Xln [Mus musculus]		UNCLASSIFIED	264691
1245	80437103 (2489, 2490)	Novel Protein sim. GBank gij4566338[dbj]BAA76357.1] - (AB016787) cytochrome o ubiquinol oxidase B [Pseudomonas putida]	Contains protein domain (PF00115) - Cytochrome C and Quinol oxidase polypeptide I	oxidase	264768
1246	80059321 (2491, 2492)	Novel Protein sim. GBank gij3581849[emb]CAA20805] - (AL031154) putative phenylalanine-IRNA synthetase beta chain [Streptomyces coelicolor]		UNCLASSIFIED	264604, 264636, 264557, 264564
1247	80064831 (2493, 2494)	Novel Protein sim. GBank gij2821884 (AE000842) - adhesion protein [Methanobacterium thermoautotrophicum]			264758, 264605, 264639
1248	88070353 (2495, 2496)	Novel Protein sim. GBank gij1352403[sp]P09467[F16P_HUMAN - FRUCTOSE-1,6-BISPHOSPHATASE (D-FRUCTOSE-1,6-BISPHOSPHATE 1-PHOSPHOHYDROLASE) (FBPASE)]	Contains protein domain (PF00316) - Fructose-1,6-bisphosphatase	UNCLASSIFIED	18108392, 264259, 26331826, 264106, 264508, 264907, 264828, 265009, 60433356, 264757, 264758, 21908754, 265010, 265011, 265018, 265019, 264760, 18108351, 18108354, 265021, 18108376, 18108377, 264630, 18108385
1249	80056657 (2497, 2498)	Novel Protein sim. GBank gij2791407[emb]CAA16001] - (AL021184) hypothetical protein Rv1473 [Mycobacterium tuberculosis]		transport	264908, 265010, 264600, 264603, 264691, 18108376
1250	12694385 (2498, 2500)	Novel Protein sim. GBank gij112785[sp]P05100[MG1_ECOLI - DNA-3-METHYLADENINE GLYCOSIDASE I (3-METHYLADENINE-DNA GLYCOSYLASE I, CONSTITUTIVE) (TAG I)]		UNCLASSIFIED	264689
1251	79850448 (2501, 2502)				264909
1252	79456087 (2503, 2504)			UNCLASSIFIED	264683, 263976
1253	80050121 (2505, 2506)	Novel Protein sim. GBank gij5870178[gb]AAD46616.1[AF16131] NRAMP manganese transport protein MnaA [Salmonella typhimurium]		glycoprotein	264600, 264603, 18108376
1254	87716767 (2507, 2508)	Novel Protein sim. GBank gij103160[pr]S22126 - finger protein unkempt - fruit fly (Drosophila melanogaster)		UNCLASSIFIED	35696286, 264910, 264764, 264688, 21908767, 55811957, 264692, 264556, 264639
1255	79169728 (2508, 2510)				264636
1256	87889508 (2511, 2512)	Novel Protein sim. GBank gij2985353[emb]CAA04608.1] - (AJ001206) pep2 [Streptomyces coelicolor]		UNCLASSIFIED	60432289, 264600, 264605, 264764, 264687, 264769, 264688, 27486265, 18108374, 18108376
1257	80201435 (2513, 2514)	Novel Protein sim. GBank gij3193306 (AF069300) - contains similarity to Arabidopsis membrane-associated salt inducible-like protein (GB:AL021637) [Arabidopsis thaliana]		UNCLASSIFIED	264094, 265019
1258	20708150 (2515, 2516)			UNCLASSIFIED	264602, 263978
1259	80186012 (2517, 2518)			UNCLASSIFIED	264906, 264448, 264908
1260	80084606 (2519, 2520)			UNCLASSIFIED	264634, 264639

1261	87412802 (2521, 2522)	Novel Protein sim. GBank gii5689511dbj BAA03039.1 - (AB029010) KIAA1087 protein [Homo sapiens]	Contains protein domain (PF01699) - Sodium/calcium exchanger protein	cadherin	29331824, 264906, 264909, 264768, 264769, 264689, 264693, 264639, 18108384, 264563
1262	13504589 (2523, 2524)	Novel Protein sim. GBank gii95100 pir S21334 - hypothetical protein 4 - Agrobacterium tumefaciens		UNCLASSIFIED	264634
1263	20710997 (2525, 2526)	Novel Protein sim. GBank gii3550958 (AF004840) - CDO [Rattus norvegicus]		struct	264602
1264	80083386 (2527, 2528)	Novel Protein sim. GBank gii3550958 (AF004840) - CDO [Rattus norvegicus]		struct	264634
1265	80253579 (2529, 2530)	Novel Protein sim. GBank gii3550958 (AF004840) - CDO [Rattus norvegicus]		UNCLASSIFIED	264563
1266	79914604 (2531, 2532)	Novel Protein sim. GBank gii1085002 pir S55056 - mitochondrial carrier protein DIF-1 homolog - Caenorhabditis elegans	Contains protein domain (PF00153) - Mitochondrial carrier proteins	UNCLASSIFIED	264766, 264636, 264638, 264567
1267	80558918 (2533, 2534)	Novel Protein sim. GBank gii4886445 emb CAB43370.1 - (AL050269) hypothetical protein [Homo sapiens]		transport	264259, 21906754, 264369
1268	88178473 (2535, 2536)	Novel Protein sim. GBank gii4886445 emb CAB43370.1 - (AL050269) hypothetical protein [Homo sapiens]	Contains protein domain (PF00583) - Acetyltransferase (GNAT) family	UNCLASSIFIED	18108398, 22278995, 56994075, 60424269, 29331827, 264109, 264512, 265007, 265008, 265009, 264595, 33109954, 33657084, 87168559, 264600, 265018, 265019, 264369, 264688, 21906767, 265020, 52644150, 264691, 33657023, 33657348, 18108374, 264556, 18108385, 60432113, 22279002, 264486
1269	79821948 (2537, 2538)	Novel Protein sim. GBank gii3334791 emb CAA19939 - (AL031107) hypothetical protein SC5A7.10c [Streptomyces coelicolor]		UNCLASSIFIED	264508, 264905, 264906, 264687, 264693
1270	80031420 (2539, 2540)	Novel Protein sim. GBank gii2851634 sp Q50591 YOD1_MYCTU - HYPOTHETICAL 50.0 KD PROTEIN CY1A11.01	Contains protein domain (PF01574) - IMP dehydrogenase / GMP reductase N terminus	dehydrogenase	265010, 264601
1271	79840499 (2541, 2542)	Novel Protein sim. GBank gii1655665 emb CAB03731 - (Z81368) hypothetical protein Rv2395 [Mycobacterium tuberculosis]		ATPase associated	35696052, 264908
1272	79462878 (2543, 2544)	Novel Protein sim. GBank gii1655665 emb CAB03731 - (Z81368) hypothetical protein Rv2395 [Mycobacterium tuberculosis]			264686, 264689
1273	80220315 (2545, 2546)	Novel Protein sim. GBank gii1655665 emb CAB03731 - (Z81368) hypothetical protein Rv2395 [Mycobacterium tuberculosis]		UNCLASSIFIED	264509, 264639
1274	95010802 (2547, 2548)	Novel Protein sim. GBank gii123726 sp P10413 HTPG_ECOLI - HEAT SHOCK PROTEIN HTPG (HIGH TEMPERATURE PROTEIN G) (HEAT SHOCK PROTEIN C82.5)	Contains protein domain (PF00183) - Hsp90 protein	UNCLASSIFIED	264905, 264908, 264909, 264769
1275	20730763 (2549, 2550)	Novel Protein sim. GBank gii123726 sp P10413 HTPG_ECOLI - HEAT SHOCK PROTEIN HTPG (HIGH TEMPERATURE PROTEIN G) (HEAT SHOCK PROTEIN C82.5)		eph	264602
1276	21148644 (2551, 2552)	Novel Protein sim. GBank gii2129478 pir S51939 - chitinase (EC 3.2.1.14) precursor - beet		UNCLASSIFIED	264369
1277	20438195 (2553, 2554)	Novel Protein sim. GBank gii1175473 sp P44555 YAAJ_HAEIN - HYPOTHETICAL PROTEIN HI0183		UNCLASSIFIED	264558
1278	11088385 (2555, 2556)	Novel Protein sim. GBank gii1175473 sp P44555 YAAJ_HAEIN - HYPOTHETICAL PROTEIN HI0183		UNCLASSIFIED	264603
1279	21658756 (2557, 2558)	Novel Protein sim. GBank gii1929513 (U64318) - ATP synthase subunit beta [Moorella thermoacetica]		synthase	264605
1280	79310959 (2559, 2560)	Novel Protein sim. GBank gii4938504 emb CAB43862.1 - (AL078465) putative protein [Arabidopsis thaliana]		struct	263976

1281	94323988 (2561, 2562)	Novel Protein sim. GBank gj1136501 (U39546) - surface protein MCA-32 [Rattus norvegicus]	Contains protein domain (PF00047) - Immunoglobulin domain	UNCLASSIFIED	29331825, 29331828, 264766, 83373044
1282	87537695 (2563, 2564)	Novel Protein sim. GBank gj13328180 (AF074266) - proto-oncogene AF4 [Mus musculus]		UNCLASSIFIED	265008
1283	20466305 (2565, 2566)	Novel Protein sim. GBank gj13261721 (emb CAB07057 - (Z92770) hypothetical protein Rv0153c [Mycobacterium tuberculosis]		UNCLASSIFIED	264605
1284	20636325 (2567, 2568)	Novel Protein sim. GBank gj13929022 (AF057696) - LspB [Haemophilus ducreyi]			264604
1285	80427330 (2569, 2570)	Novel Protein sim. GBank: gj1417154 [sp P33126 HS82_ORYSA - HEAT SHOCK PROTEIN 82	Contains protein domain (PF00183) - Hsp90 protein	eph	264766, 264689, 263967
1286	20465254 (2571, 2572)	Novel Protein sim. GBank gj12078004 (emb CAB08451 - (Z95207) gorA [Mycobacterium tuberculosis]		reductase	264605, 264639
1287	80417530 (2573, 2574)			UNCLASSIFIED	265011, 264602, 264766, 264687, 264769, 264689, 18108370, 264636, 18108385, 264563
1288	95338101 (2575, 2576)	Novel Protein sim. GBank gj15353510 (gb AAD42161.1 AF08891 - (AF088916) emilin precursor [Homo sapiens]	Contains protein domain (PF00386) - C1q domain	collagen	35696052, 264107, 264508, 264509, 264905, 264906, 264907, 264908, 264909, 264510, 264511, 265007, 264512, 264910, 265009, 33857402, 264595, 264758, 265011, 265019, 264760, 18108351, 264681, 264784, 264288, 264685, 264766, 264687, 264768, 264769, 265020, 265021, 264534, 264692, 18108370, 264628, 18108374, 35698423, 264555, 264556, 264557, 264558, 18108385, 264564, 264566, 264567, 264486, 18108391
1289	11813647 (2577, 2578)			UNCLASSIFIED	264637
1290	19526027 (2579, 2580)	Novel Protein sim. GBank gj1169995 [sp P46023 GPCR_LYMST - G-PROTEIN COUPLED RECEPTOR GRL101 PRECURSOR	Contains protein domain (PF00001) - 7 transmembrane receptor (rhodopsin family)	tm7	264563
1291	80470266 (2581, 2582)	Novel Protein sim. GBank gj12072674 (emb CAB08305 - (Z95120) rhlE [Mycobacterium tuberculosis]	Contains protein domain (PF00271) - Helicases conserved C-terminal domain	helicase	265007, 265008, 264769
1292	94723316 (2583, 2584)	Novel Protein sim. GBank gj1835755 (U86338) - zinc finger protein Png-1 [Mus musculus]	Contains protein domain (PF01530) - Zinc finger, C2HC type	transcript factor	264082, 264259, 29331822, 29331824, 264508, 264908, 264909, 264512, 265008, 265009, 264591, 265019, 264369, 264288, 264686, 264768, 264693, 18108374, 264632, 56182323, 264639, 83373044, 22278002, 264482, 264563
1293	80067536 (2585, 2586)			UNCLASSIFIED	265008, 55812038, 264369, 264556
1294	82125908 (2587, 2588)	Novel Protein sim. GBank gj12129173 (pf F64453 - oxaloacetate decarboxylase (EC 4.1.1.3) alpha subunit - Melhanococcus jannaschii		biotindep	264802, 264605, 264760, 18108351, 264689, 33657023, 264559
1295	11686851 (2589, 2590)	Novel Protein sim. GBank gj15441779 (emb CAB46803.1 - (AL096811) putative alcohol dehydrogenase (zinc-binding) [Streptomyces coelicolor A3(2)]		dehydrogenase	264689

1296	11687904 (2591, 2592)	Novel Protein sim. GBank gij4982191gb AAD36688.1 AE00180 - (AE001805) DNA- directed DNA polymerase I [Thermotoga maritima]	Contains protein domain (PF01367) - 5'-3' exonuclease	UNCLASSIFIED	264591, 264639 264693
1297	79839300 (2593, 2594)	Novel Protein sim. GBank gij1943770 (U97191) - F53F10.1 gene product [Caenorhabditis elegans]		struct	18108348, 265017
1298	94239506 (2595, 2596)	Novel Protein sim. GBank gij3445181 (AC005498) - R31865_2 [Homo sapiens]	Contains protein domain (PF01352) - KRAB box	transcript factor	264488, 264906, 264909, 22279002, 264566 264605
1299	80255378 (2597, 2598)	Novel Protein sim. GBank gij4062973 dbj BAA36204.1 - (AB017138) alpha subunit of malonate decarboxylase [Pseudomonas putida]		UNCLASSIFIED	264906
1300	80064867 (2599, 2600)				85658542, 265020 264908
1301	17939814 (2601, 2602)			UNCLASSIFIED	264508 264566
1302	95418198 (2603, 2604)			UNCLASSIFIED	264636
1303	9684121 (2605, 2606)				
1304	79377196 (2607, 2608)				
1305	19905899 (2609, 2610)				
1306	13069230 (2611, 2612)	Novel Protein sim. GBank gij3242273 emb CA807017 - (Z92868) hypothetical protein Rv0236c [Mycobacterium tuberculosis]			
1307	82201029 (2613, 2614)	Novel Protein sim. GBank gij1502421 (U59433) - 3-ketoacyl acyl carrier protein reductase [Bacillus subtilis]	Contains protein domain (PF00516) - Envelope glycoprotein GP120	UNCLASSIFIED	264807, 264592, 264764 264555
1308	21426814 (2615, 2616)	Novel Protein sim. GBank gij95819 pir S16298 - ferric enterobactin transport protein fepC - Escherichia coli		transport	264906, 18108354
1309	79263011 (2617, 2618)	Novel Protein sim. GBank gij3459220 emb CAB48893.1 - (AL096837) putative iron-sulfur protein [Streptomyces coelicolor A3(2)]		UNCLASSIFIED	264605
1310	20466319 (2619, 2620)				
1311	87813142 (2621, 2622)				
1312	88061720 (2623, 2624)	Novel Protein sim. GBank gij4455118 gb AAD21084 - (AF125156) zinc finger DNA binding protein 99 [Homo sapiens]	Contains protein domain (PF00096) - Zinc finger, C2H2 type	dna_rna_bind	35696286, 29331827, 264908, 265008, 264764, 264766, 264686, 21908787, 21906769, 35695917, 264691, 264693 22278995, 22278998, 22278999, 264905, 264908, 265011, 265017, 265019, 264687, 21906768, 265020, 265021, 33657023, 22279002, 264564
1313	91225458 (2625, 2626)	Novel Protein sim. GBank gij4929733 gb AAD34127.1 AF151890 - (AF151890) CGI-132 protein [Homo sapiens]	Contains protein domain (PF00886) - Ribosomal protein S16	ribosomal prot	22278998, 22278999, 264259, 20281099, 29146498, 264508, 264908, 66712502, 50433356, 60433438, 265011, 265017, 264683, 264288, 21906765, 21906767, 29146627, 21906768, 35695917, 265021, 33657023, 33657109, 18108370, 18108377, 35695855, 80432113, 22278000, 264563, 18108390 264693
1314	56928053 (2627, 2628)				
1315	84357192 (2629, 2630)	Novel Protein sim. GBank gij2589223 (AF026565) - ring finger protein [Mus musculus]	Contains protein domain (PF00097) - Zinc finger, C3HC4 type (RING finger)	interleukinrecept	264691

1316	95381609 (2631, 2632)	Novel Protein sim. GBank gll589407[dbj BAA82987.1] - (AB028958) KIAA1035 protein [Homo sapiens]		kinase	56182575, 56181886, 20281171, 29331822, 29331824, 60424269, 29331825, 35696052, 52644045, 264591, 60432229, 265018, 265019, 55811150, 56181562, 21906765, 21906787, 21906788, 35695917, 60170815, 33657023, 65274620, 33657109, 35695763, 35695855, 18108387, 87188518, 60432113, 22279002, 264584
1317	88055167 (2633, 2634)	Novel Protein sim. GBank gll483675[gb AAD30541.1 AF13491] - (AF134918) semaphorin subclass 4 member G [Mus musculus]		UNCLASSIFIED	264093, 264906, 264908, 264369, 264684
1318	95322893 (2635, 2636)	Novel Protein sim. GBank gll4680204[gb AAD27667.1 AF11417] - (AF114171) hypothetical protein [Sorghum bicolor]		UNCLASSIFIED	18108392, 18108348, 265011, 265017, 18108359, 18108362, 56182323, 18108385, 22279000
1319	94238546 (2637, 2638)				264908, 264909, 265006, 265008, 264592, 265019, 264766, 56181562, 18108368, 264628, 264629, 18108377, 264638
1320	86603567 (2639, 2640)	Novel Protein sim. GBank gll4240183[dbj BAA74870.1] - (AB020854) KIAA0847 protein [Homo sapiens]		UNCLASSIFIED	35696286, 55812038, 265018, 21906768, 265020, 263978, 22279002
1321	86676351 (2641, 2642)	Novel Protein sim. GBank gll4886505[emb CAB43377.1] - (AL050276) hypothetical protein [Homo sapiens]	Contains protein domain (PF00651) - BTB/POZ domain	- transcript factor	80432049, 29331828, 264907, 264908, 264909, 264910, 55812038, 264601, 264762, 264764, 264766, 264768, 264769, 264628, 18108374, 264634, 264635, 18108385
1322	87755272 (2643, 2644)	Novel Protein sim. GBank gll526258[emb CAB45736.1] - (AL080143) hypothetical protein [Homo sapiens]	Contains protein domain (PF00096) - Zinc finger, C2H2 type	- dna_m_bind	29331828, 264908, 265020, 33657023, 264693, 264404
1323	94845931 (2645, 2646)	Novel Protein sim. GBank gll5459516[dbj BAA82407.1] - (AB029821) phosphatidylethanolamine N-methyltransferase [Homo sapiens]		synthase	65274572, 56994075, 264259, 29331822, 29331827, 264104, 56182435, 87168474, 18108351, 264288, 21906766, 21906767, 35695917, 265020, 264693, 65274791, 56182323, 18108387
1324	87737614 (2647, 2648)	Novel Protein sim. GBank gll503171[ref NP_005704.1 pGPBP - goodpasture antigen-binding protein	Contains protein domain (PF01852) - START domain		22278996, 22278998, 29331828, 264905, 264907, 29331830, 264908, 264510, 265008, 264595, 264759, 21906754, 265018, 264288, 264768, 264769, 21906768, 265022, 18108376, 264631, 264632, 264634, 264636, 264638, 264563, 264564, 264565, 264566
1325	94847471 (2649, 2650)	Novel Protein sim. GBank gll3294501 (U64857) - similar to the DPTIKunitz family of inhibitors; most similar to tissue factor pathway inhibitor precursor [Caenorhabditis elegans]	Contains protein domain (PF00080) - protease Thrombospondin type 1 domain	- protease	35696286, 264905, 264906, 264907, 264908, 264909, 264910, 264593, 33657402, 264758, 85658542, 264760, 264768, 264769, 264691, 35696423
1326	87316289 (2651, 2652)	Novel Protein sim. GBank gll1397275 (U61947) - C06G3.8 gene product [Caenorhabditis elegans]		UNCLASSIFIED	264259, 66712502, 264682, 264683, 264635

1327	95322897 (2653, 2654)	Novel Protein sim. GBank gi 728832 sp P39189 ALU2_HUMAN - IIII ALU SUBFAMILY SB WARNING ENTRY IIII	Contains protein domain (PF00279) - Plant lipid transfer protein family	UNCLASSIFIED	18108398, 22278996, 22278997, 22278999, 264091, 264259, 29331822, 29331824, 29331825, 29331826, 29331827, 29331828, 264105, 264905, 56182435, 264112, 265008, 265009, 21906754, 265010, 265011, 265017, 265019, 264681, 264448, 264764, 264684, 264288, 264685, 264768, 264688, 21906767, 21906769, 29148629, 265020, 264690, 264691, 264692, 264693, 263967, 33857109, 33657182, 27486262, 33657349, 18108370, 18108374, 55810764, 35695655, 264634, 56182323, 83373044, 87168518, 60432113, 22279000, 22279002, 264563, 264567, 264488, 22278997, 29331826, 264595, 18108351, 264766, 22279002, 264482, 264567
1328	87753493 (2655, 2656)			UNCLASSIFIED	
1329	87755276 (2657, 2658)	Novel Protein sim. GBank gi 4678224 gb AAD26989.1 AC00713 - (AC007135) unknown protein [Arabidopsis thaliana]		UNCLASSIFIED	22278996, 29331827, 264684, 264692, 33657109
1330	87727737 (2659, 2660)	Novel Protein sim. GBank gi 437310 (L23504) - nodulin [Medicago truncatula]		UNCLASSIFIED	264259, 29331825, 264512, 265019, 265021, 264555, 264558, 56528486
1331	87376764 (2661, 2662)	Novel Protein sim. GBank gi 4589566 dbj BAA76815.1 - (AB023188) KIAA0971 protein [Homo sapiens]		UNCLASSIFIED	264259, 29331826, 29331827, 35696052, 28331828, 60170831, 264448, 264686, 21906765, 55811957, 265020, 33657023, 33657109, 263973, 55811576, 35696423, 35695855, 56182323
1332	94845937 (2663, 2664)	Novel Protein sim. GBank gi 5459516 dbj BAA82407.1 - (AB029821) phosphatidylethanolamine N-methyltransferase [Homo sapiens]		synthase	56274572, 22278996, 56994075, 22278999, 60432049, 264259, 29331822, 29331826, 60432289, 29331827, 35696052, 52644045, 58182435, 264510, 21906754, 87168559, 265018, 265019, 264448, 264288, 264369, 264686, 21906765, 21906766, 21906767, 21906768, 265020, 265021, 52644150, 33657023, 56182323, 18108387, 60432113, 22279002
1333	88098476 (2665, 2666)	Novel Protein sim. GBank gi 5689527 dbj BAA83047.1 - (AB029018) KIAA1095 protein [Homo sapiens]		UNCLASSIFIED	60432289, 66712502, 264591, 60433356, 60433438, 55812038, 265010, 264639, 56528486
1334	87592388 (2667, 2668)	Novel Protein sim. GBank gi 2662536 (AF036685) - Similar to protein-tyrosine phosphatase [Caenorhabditis elegans]		phosphatase	264905
1335	87644798 (2669, 2670)	Novel Protein sim. GBank gi 4240285 dbj BAA74921.1 - (AB020705) KIAA0898 protein [Homo sapiens]	Contains protein domain (PF00643) - B-box zinc finger.	UNCLASSIFIED	22278998, 22278999, 29331827, 264508, 264511, 265007, 265008, 265009, 60433438, 21906754, 87168559, 265017, 264288, 21906765, 21906767, 21906768, 21906769, 265020, 33657109, 27486264, 18108374, 264556, 264638, 264557, 60170394, 264559, 18108385, 264553

1336	87787890 (2671, 2672)	Novel Protein sim. GBank gi485445 sp P33485 VNUA_PrvKA - PROBABLE NUCLEAR ANTIGEN				264509, 264905, 264512, 264764, 264693, 264635, 264637
1337	94312042 (2673, 2674)	Novel Protein sim. GBank gi5869471 dbj BAA83019.1 - (AB028990) KIAA1067 protein [Homo sapiens]		UNCLASSIFIED		58182575, 56994075, 22278998, 22278999, 264092, 264259, 60432289, 29331826, 264906, 264908, 264909, 264112, 265008, 265009, 60433356, 55812038, 33657084, 265011, 265017, 265018, 265019, 264682, 264448, 264883, 264369, 264688, 264689, 21906768, 21906769, 265020, 264691, 27486281, 20281089, 18108379, 55811576, 35695855, 56182323, 60432113, 22279002, 264567
1338	80366114 (2675, 2676)			UNCLASSIFIED		29331822, 265010, 264288, 264689, 18108370, 35695855
1339	80249231 (2677, 2678)	Novel Protein sim. GBank gi1176422 [U43194] - rhophilin [Mus musculus]		UNCLASSIFIED		35696052, 264909, 264688, 264556, 264558
1340	88316311 (2679, 2680)					264905, 264907, 87168559, 264764
1341	86101485 (2681, 2682)					264681, 264685, 264686, 264692
1342	80089017 (2683, 2684)	Novel Protein sim. GBank gi5018364 emb CAB44507.1 - (AL035542) dJ994E9.5 (hs6M1-17 (novel 7 transmembrane receptor (rhodopsin family) (olfactory receptor like) protein)) [Homo sapiens]	Contains protein domain (PF00001) - tm7 7 transmembrane receptor (rhodopsin family)		264629	
1343	80082862 (2685, 2686)	Novel Protein sim. GBank gi4557543 ref NP_001384.1 pECM2 - extracellular matrix protein 2	Contains protein domain (PF00560) - struct Leucine Rich Repeat		264910, 264686, 264534	
1344	20562559 (2687, 2688)	Novel Protein sim. GBank gi2144101 p I 55210 - tricarboxylate carrier - rat (fragment)		glycoprotein		263978
1345	91225548 (2689, 2690)	Novel Protein sim. GBank gi3881052 emb CAA19523 - (AL023843) predicted using GeneFinder; similar to serine/threonine kinase; cDNA EST yk246a12.3 comes from this gene; cDNA EST yk358c10.5 comes from this gene; cDNA EST EMBL:M89047 comes from this gene; cDNA EST yk246a12.5 comes...	Contains protein domain (PF00069) - Kinase Eukaryotic protein kinase domain		264909, 60170394	
1346	80255717 (2691, 2692)				22278998, 264907, 264681, 264685, 264689, 265020, 264693, 22279000, 22279002, 264566	
1347	80417393 (2693, 2694)	Novel Protein sim. GBank gi4504379 ref NP_003658.1 pHG38 - orphan G protein- coupled receptor HG38	Contains protein domain (PF00560) - glycoprotein Leucine Rich Repeat		264908, 264908, 264909, 265006, 264910, 265011, 265017, 264764, 264766, 264787, 264789, 264631, 264634, 264638, 264567, 264486	
1348	87352335 (2695, 2696)	Novel Protein sim. GBank gi3399720 dbj BAA32100 - (AB010999) peptidylarginine deiminase type IV [Rattus norvegicus]	UNCLASSIFIED		264488, 264489, 264508, 264509, 264510, 264511, 264512, 264591, 264592, 264601, 264684, 264685, 264769, 264532, 264534, 264555, 264556, 264557, 264558, 22279002, 264486	

1349	91225548 (2697, 2698)	Novel Protein sim. GBank gll2144101[pir]55210 - Itricarboxylate carrier - rat (fragment)		UNCLASSIFIED	52646842, 35696286, 22278996, 22278998, 22278999, 264259, 29331822, 29331824, 35696052, 264509, 264905, 264906, 264907, 264908, 264909, 264511, 265006, 264512, 264910, 60170831, 264591, 60433438, 264757, 21906754, 265017, 265018, 264605, 264780, 264762, 264288, 264766, 264689, 21906765, 21906766, 21906767, 21906768, 55811957, 35695917, 265020, 264534, 264691, 264692, 33657023, 264693, 33657349, 18108374, 18108376, 35696423, 60170394, 22279000, 22279002, 264563, 264564
1350	87093136 (2699, 2700)			UNCLASSIFIED	52646842, 264259, 29331825, 264908, 264511, 264604, 264288, 21906769, 265020, 33657182, 33657349, 18108374, 35695855, 264555, 264558, 18108385, 22278902, 264486
1351	87361327 (2701, 2702)	Novel Protein sim. GBank gll4887239[gb]AAD32245.1] - (AF064564) BAW protein [Fugu rubripes]		UNCLASSIFIED	264906, 264907, 264638
1352	80076386 (2703, 2704)			UNCLASSIFIED	264693, 263981
1353	95345417 (2705, 2706)	Novel Protein sim. GBank gll2144101[pir]55210 - Itricarboxylate carrier - rat (fragment)		UNCLASSIFIED	35696286, 60424269, 264905, 264509, 264906, 264907, 264908, 264909, 264511, 264512, 264910, 264758, 264596, 55811386, 265011, 264605, 55811150, 264762, 264764, 264766, 52644229, 56181562, 35695917, 265022, 33657023, 264693, 35695763, 60431528, 264629, 263978, 35696423, 35695855, 264630, 264634, 264635, 264636, 264637, 264638, 264639, 18108385, 264563, 264564, 264566
1354	95350845 (2707, 2708)	Novel Protein sim. GBank gll4889108[gb]AAD27763.1[AF07703] - (AF077030) hypothesized 43.2 kDa protein [Homo sapiens]		UNCLASSIFIED	22278995, 22278999, 29331826, 264906, 265008, 33657402, 21906754, 265011, 87168559, 264684, 264368, 264769, 264689, 21906765, 21906768, 52644150, 33657023, 264692, 264693, 18108374, 83373044, 87168518, 22279000
1355	88260186 (2709, 2710)	Novel Protein sim. GBank gll1469199[db]BAA09487] - (D50928) The KIAA0138 gene product is novel. [Homo sapiens]	Contains protein domain (PF00076) - RNA recognition motif. (a.k.a. RRM, RBD, or RNP domain)	dna_ma_bind	22278998, 22278997, 264259, 66714117, 264511, 21906754, 265010, 264769, 264689, 21906765, 21906768, 21906769, 264532, 27486262, 264629, 264638, 264556, 264638, 264639, 264482, 264484

1356	95313991 (2711, 2712)	Novel Protein sim. GBank gll113865 (U40342) - ninein [Mus musculus]		siRNA	18108397, 22278995, 22278996, 22278998, 264094, 29331828, 264905, 265006, 265007, 265008, 265010, 265017, 265018, 265019, 264764, 18108354, 264689, 21906765, 285022, 18108364, 35686423, 83373044, 18108387
1357	88260268 (2713, 2714)	Novel Protein sim. GBank gll897693[embjCAA90330] - (Z50026) phosphatidylcholine transfer protein [Bos taurus]	Contains protein domain (PF01852) - START domain		264259, 29331822, 29331825, 264510, 87168559, 265018, 264448, 264288, 21906765, 21908766, 21908768, 265021, 264693, 18108376
1358	38719455 (2715, 2716)	Novel Protein sim. GBank gll556219 (L36831) - transcription regulator [Mus musculus]			264757
1359	87771643 (2717, 2718)			UNCLASSIFIED	264907, 264909, 264510, 264511, 264512, 18108351, 264764, 264534, 33657023, 18108374, 264634, 264635, 264638, 264639, 18108385, 264486, 264587
1360	87738272 (2719, 2720)	Novel Protein sim. GBank gll2598282[embjCAA75612] - (Y15417) acetate-CoA ligase [Coprinus cinereus]		synthase	60432289, 264605
1361	87593527 (2721, 2722)	Novel Protein sim. GBank gll5689443[dbjBAA83005.1] - (AB028976) KIAA1053 protein [Homo sapiens]	Contains protein domain (PF00536) - SAM domain (Sterile alpha motif)	UNCLASSIFIED	35696286, 22278997, 22278999, 264259, 29331826, 264508, 264509, 264905, 264907, 264908, 265007, 265009, 33109954, 21906754, 87168474, 265011, 264761, 264683, 264288, 264766, 264769, 264689, 21906768, 265020, 265021, 33657023, 55811576, 35696423, 264834, 60432113, 22279002, 264482, 264486
1362	95287961 (2723, 2724)	Novel Protein sim. GBank gll5689411[dbjBAA82989.1] - (AB028980) KIAA1037 protein [Homo sapiens]	Contains protein domain (PF00400) - WD domain, G-beta repeat	eph	56182575, 56181686, 60432049, 264259, 29331822, 56182181, 29331827, 35696052, 29331828, 264905, 264906, 264908, 264595, 55812038, 85658542, 55811150, 264681, 264288, 264369, 56181562, 60431528, 55810764, 35696423, 60431850, 264558
1363	85758476 (2725, 2726)	Novel Protein sim. GBank gll1130494 (U35776) - ADP-ribosylation factor 1-directed GTPase activating protein [Rattus norvegicus]	Contains protein domain (PF01412) - Putative GTP-ase activating protein for Arf	UNCLASSIFIED	264488, 29331826, 264907, 264687, 264689, 264693
1364	88179488 (2727, 2728)				
1365	83003108 (2728, 2730)	Novel Protein sim. GBank gll4589562[dbjBAA76803.1] - (AB023176) KIAA0959 protein [Homo sapiens]		oncogene	60432289, 60433356, 60433438, 87168559, 264603, 18108351, 21908766, 35696423, 60432113
1366	87003262 (2731, 2732)	Novel Protein sim. GBank gll10849443[dbjS54495] - hypothetical protein YPR021c - yeast (Saccharomyces cerevisiae)	Contains protein domain (PF00153) - Mitochondrial carrier proteins	transport	264766

1367	87721210 (2733, 2734)	Novel Protein sim. GBank gi 4884088 emb CAB43240.1 -(AL050018) hypothetical protein [Homo sapiens]	Contains protein domain (PF01342) - SAND domain	UNCLASSIFIED	264488, 52646842, 52646365, 22278995, 56994075, 35696286, 22278996, 22278998, 22278999, 264259, 29331824, 66714117, 29331825, 60432289, 35696052, 264905, 264907, 264908, 264909, 264510, 265006, 265007, 264512, 264810, 265009, 60170831, 33657402, 55812038, 21908754, 265011, 87168559, 265017, 265019, 18108351, 264448, 264682, 264683, 264288, 264369, 264686, 264767, 264689, 21908765, 21908768, 21906768, 21908769, 55811957, 265020, 265021, 265022, 264534, 60170615, 264690, 264691, 18108362, 33657023, 33657109, 33657349, 264628, 18108370, 18108374, 18108378, 55811576, 35696423, 35695855, 264635, 264555, 264637, 264556, 52644332, 60170394, 264558, 18108381, 18108385, 56526486, 22279000, 264563, 264567
1368	84320078 (2735, 2736)	Novel Protein sim. GBank gi 464561 sp P35289 RB15_RAT RAS-RELATED PROTEIN RAB-15	Contains protein domain (PF00071) - Ras family	oncogene	264259, 29331822, 29331826, 60432289, 29331827, 35696052, 264508, 264905, 264906, 264908, 264909, 264510, 265007, 264910, 60433438, 264758, 85658542, 87168559, 264600, 264801, 264760, 264764, 264765, 264768, 52644229, 264689, 35695917, 265020, 265021, 264631, 264632, 264634, 264637, 52644332, 264558, 264639, 83373044, 264563, 264566, 264486, 264587, 265008, 60432229, 60433356, 33657084, 21908764, 21908769, 264555, 264638, 264559, 264567
1369	86634033 (2737, 2738)	Novel Protein sim. GBank gi 2062702 (U90550) - butyrophilin [Homo sapiens]		UNCLASSIFIED	
1370	85316910 (2739, 2740)	Novel Protein sim. GBank gi 5031823 ref NP_005823.1 pKCNM - potassium large conductance calcium-activated channel, subfamily M, beta member 2		potassium_channel	22278996, 264259, 29331822, 29331824, 29331826, 29331827, 35696052, 264508, 264509, 264905, 264908, 264907, 264908, 264909, 264510, 264511, 264512, 264758, 265011, 265019, 264764, 264766, 264768, 21906767, 35695917, 18108362, 35696423, 264632, 264635, 264636, 264555, 264638, 264558, 264639, 18108385, 65274727, 264404, 264563, 264566, 264486
1371	85336512 (2741, 2742)	Novel Protein sim. GBank gi 5032203 ref NP_005714.1 PTSPA - tetraspan 5	Contains protein domain (PF00335) - 4 transmembrane segments integral membrane proteins	glycoprotein	22278996, 264259, 29331822, 29331824, 29331825, 29331826, 29331827, 264905, 264509, 29331830, 66712502, 265008, 265009, 264758, 33657084, 85658542, 265010, 265018, 265019, 264762, 264448, 35695917, 33657109, 33657182, 33657349, 35695855, 264558, 22278002, 264563

1372	80248517 (2743, 2744)	Novel Protein sim. GBank gij1840708[idbj BAA09334] - (D50665) trans-sialidase [Trypanosoma cruzi]		collagen	263978
1373	80499421 (2745, 2746)			UNCLASSIFIED	264769, 21908765, 21908767, 22278999, 264691, 264910, 55812038, 265010, 264681, 264684
1374	95087036 (2747, 2748)	Novel Protein sim. GBank gij111876[ipir JC1241] - beta-Interferon-induced protein - rat		Interferon	264907, 264510, 265007, 264512, 265008, 60432228, 264689, 65274791, 264555, 264556, 264557, 83373044, 60432113
1375	94236942 (2749, 2750)	Novel Protein sim. GBank gij5849176[gb AAD03500.2] - (AF051155) G beta-like protein GBL [Rattus norvegicus]	Contains protein domain (PF00400) - WD domain, G-beta repeat	Kinase	52844507, 52845156, 52846842, 52846365, 56182575, 56181886, 22278998, 55994075, 35696286, 22278997, 22278998, 22278999, 264259, 29331822, 52645080, 29331824, 29331825, 60432289, 29331826, 29331827, 29331828, 35696052, 33656970, 264905, 264509, 264908, 264907, 264908, 29331830, 264909, 265006, 264511, 265007, 265008, 265009, 33657402, 60433336, 52646317, 33109954, 33657084, 52644296, 87188474, 87168559, 264600, 265017, 265018, 265019, 55811150, 18108351, 264448, 264764, 264288, 264369, 264766, 52644229, 21908765, 21906766, 21906767, 21906768, 21908769, 55811957, 35695917, 265020, 265021, 52644150, 33657023, 264693, 65274620, 52645129, 33657109, 27486261, 33657349, 27488285, 35695763, 18108378, 55810784, 35698423, 35695855, 264830, 264631, 264634, 264636, 264555, 264638, 18108385, 87168518, 60432113, 22279000, 22279002, 264563, 264564, 264566, 264567, 264768, 264769, 35695917, 22278997, 264691, 284259, 29331822, 264693, 35696052, 264508, 264509, 264905, 264906, 264628, 264908, 264629, 18108372, 264909, 264510, 264511, 264512, 265008, 264630, 264631, 264910, 264632, 264634, 264635, 264636, 264591, 264592, 264637, 264638, 264558, 264639, 33657402, 264595, 18108385, 56526488, 265010, 265011, 264600, 264563, 264762, 264564, 264565, 264764, 264486, 264766
1376	87399050 (2751, 2752)	Novel Protein sim. GBank gij138350[sp P28868 VGLX_HSVB - GLYCOPROTEIN X PRECURSOR		UNCLASSIFIED	229331824, 264591, 265019, 264686, 264768, 55811957, 264693, 22279002
1377	88964242 (2753, 2754)	Novel Protein sim. GBank gij1663648 (U75321) - chromaffin granule ATPase II homolog [Mus musculus]	Contains protein domain (PF00122) - E1-E2 ATPase	ATPase_associated	

1376	87595071 (2755, 2756)	Novel Protein sim. GBank gij4107015[dbj BAA36293] - (AB001772) PEM-5 [Clona savigny]			22278994, 22278998, 264093, 264094, 264259, 29331824, 29331827, 265009, 265018, 265019, 18108351, 264389, 264288, 29148627, 55811957, 264691, 18108366, 33657109, 18108368, 264635, 263981, 18108385
1379	85679344 (2757, 2758)	Novel Protein sim. GBank gij3252872 (AF035620) - BRCA1-associated protein 2 [Homo sapiens]			265020
1380	87627862 (2759, 2760)	Novel Protein sim. GBank gij483737[gb AAD30662.1] - (AF096834) germ cell specific Y-box binding protein [Homo sapiens]		nucl_recpt	264510, 264512, 265009, 264288, 264564
1381	88178656 (2761, 2762)	Novel Protein sim. GBank gij4731580[gb AAD28508.1]AF12538 - (AF125384) L82A [Drosophila melanogaster]		UNCLASSIFIED	87168559, 265017, 264628, 22279002
1382	94847576 (2763, 2764)		Contains protein domain (PF00583) - Acetyltransferase (GNAT) family	UNCLASSIFIED	22278994, 22278997, 22278999, 29331822, 29331824, 29331826, 265007, 60432229, 60433356, 85658542, 265017, 265018, 264685, 264768, 21906766, 35695917, 33657023, 27486261, 27486262, 35695763, 35695855, 87168518, 22279002
1383	87860598 (2765, 2766)			UNCLASSIFIED	18108396, 264692
1384	86815895 (2767, 2768)			UNCLASSIFIED	264488, 264508, 264509, 264509, 264905, 264906, 264908, 264909, 264511, 264512, 264910, 264760, 18108351, 284766, 284769, 35695855, 264630, 264638, 284555, 264638, 264483, 264564, 264486
1385	86378788 (2769, 2770)	Novel Protein sim. GBank gij2384732 (AF015911) - NAC-1 protein [Rattus norvegicus]		UNCLASSIFIED	35696052, 55811386, 264688, 21906765, 265020, 33657023, 18108385
1386	91013049 (2771, 2772)	Novel Protein sim. GBank gij2384910 (AF022982) - contains similarity to the A-type potassium current class of channel proteins [Caenorhabditis elegans]		Inf	60432289, 29331828, 264908, 264907, 56182435, 265011, 264681, 60170615, 33657023, 83373044, 264566
1387	87797958 (2773, 2774)	Novel Protein sim. GBank gij4160304[emb CAA10600] - (AJ132192) HS1 binding protein 3 [Mus musculus]		UNCLASSIFIED	264591
1388	95101652 (2775, 2776)	Novel Protein sim. GBank gij4895184[gb AAD32753.1]AC00723 - (AC007231) putative disease resistance protein [Arabidopsis thaliana]		glycoprotein	65274572, 22278999, 264259, 29331826, 29331827, 35696052, 264509, 264907, 264908, 264909, 265006, 265008, 60170831, 33657402, 60433438, 264596, 21906754, 87168559, 264600, 265017, 264683, 18108354, 52644229, 21906765, 21906766, 21906767, 21906768, 21906769, 265021, 264682, 33657023, 33657109, 35695855, 264558, 60170394, 83373044, 22279000

1389	91256016 (2777, 2778)	Novel Protein sim. GBank gij5689387[dbj BAA82977.1] - (AB028948) KIAA1025 protein [Homo sapiens]	Contains protein domain (PF00641) - Zn-finger in Ran binding protein and others.	UNCLASSIFIED	65274572, 22278999, 264259, 29331822, 29331824, 29331825, 60432289, 29331828, 29146499, 264906, 66712502, 55812038, 265017, 265018, 265019, 18108351, 264369, 21906765, 21906766, 21906767, 21906768, 265020, 265021, 264692, 33657023, 33657349, 18108370, 18108374, 55811576, 264555, 264558, 264557, 60170394, 83373044, 22278000, 264563, 264564
1390	94111916 (2779, 2780)	Novel Protein sim. GBank gij3702285 (AC005763) - R33083_1 [Homo sapiens]		peptidase	52645156, 52646365, 264259, 52645080, 29331826, 29331826, 264806, 52644045, 265009, 33657084, 52644296, 87168474, 87168559, 265017, 265018, 264760, 264682, 264288, 264686, 264687, 56181562, 52644229, 21906765, 21906769, 35695917, 265020, 265021, 60170615, 52644150, 33657023, 27486261, 27486264, 65274791, 264631, 264555, 52644332, 87168518, 22279000, 264567
1391	91227345 (2781, 2782)	Novel Protein sim. GBank gij1346910[sp P28650]PUA1_MOUSE - ADENYLOSUCCINATE SYNTHETASE, MUSCLE ISOZYME (IMP--ASPARTATE LIGASE)	Contains protein domain (PF00709) - Adenylosuccinate synthetase		29331826, 29331828, 28331830, 264448, 264288, 33657023, 18108365, 264555, 264556, 83373044
1392	94311097 (2783, 2784)	Novel Protein sim. GBank gij726286 (U22394) - mSin3A [Mus musculus]			52646842, 65274572, 22278994, 22278995, 35696286, 56994075, 22278997, 22278998, 22278999, 60432049, 264259, 52645080, 29331822, 29331824, 60432289, 29331826, 29331827, 35696052, 29331828, 33656970, 264907, 52644045, 265006, 265007, 265008, 60431735, 60433356, 52646317, 55811386, 52644296, 265010, 87168559, 265017, 264604, 265018, 265019, 264448, 264288, 264369, 264766, 21906764, 21906767, 35695917, 265020, 265021, 33657109, 52645129, 27486261, 27486262, 27486265, 33657349, 35695763, 18108370, 18108374, 18108376, 55811576, 35696423, 35695855, 264636, 52644332, 18108382, 18108385, 87168518, 60432113, 22279000, 264484, 264566, 18108391
1393	80409472 (2785, 2786)		Contains protein domain (PF00560) - Leucine Rich Repeat	UNCLASSIFIED	264763, 264631
1394	15028819 (2787, 2788)			UNCLASSIFIED	264629
1395	95361471 (2789, 2790)	Novel Protein sim. GBank gij2274845[dbj BAA21534] - (D88461) N-WASP [Rattus rattus]		UNCLASSIFIED	265009, 18108381

1396	95363253 (2791, 2792)	Novel Protein sim. GBank gi 2135904 pir 54810 - pHLE1F1 - human			22278997, 22278999, 264259, 29331825, 60432289, 29331828, 29148498, 29148499, 264907, 264908, 29331830, 264909, 265006, 265007, 265008, 265009, 60433356, 265010, 264602, 265017, 265018, 265019, 18108354, 52644229, 18108358, 21906767, 29148627, 21906768, 21906769, 29148629, 29148784, 265021, 265022, 18108368, 18108374, 56182323, 18108385, 264563, 264567, 35696286, 264907, 66712502, 264510, 35695917, 264692, 264693, 35696423, 264259, 29331822, 29331824, 29331825, 29331827, 35696052, 33656970, 87168474, 265018, 265019, 264682, 264768, 21906767, 265020, 33657023, 27486281, 55811576, 264632, 264639, 83373044, 87168518, 22279002
1397	87631317 (2793, 2794)				UNCLASSIFIED
1398	91233667 (2795, 2796)	Novel Protein sim. GBank gi 5420389 emb CAB46680.1 - (AJ243460) proteophosphoglycan [Leishmania major]			
1399	87631076 (2797, 2798)	Novel Protein sim. GBank gi 249887 sp Q09232 YQ22_CAEEL - HYPOTHETICAL 32.0 KD PROTEIN C09F5.2 IN CHROMOSOME III			UNCLASSIFIED
1400	95418064 (2799, 2800)	Novel Protein sim. GBank gi 283920 pir S27939 - tensin - chicken	Contains protein domain (PF00017) - Src homology domain 2		56182575, 22278994, 22278997, 264259, 29331822, 29331825, 29331826, 29331827, 29331828, 264908, 56182435, 264112, 265009, 265011, 265017, 265018, 265019, 264760, 264762, 264765, 264288, 264685, 264687, 56181562, 264768, 21906766, 21906767, 55811957, 264691, 264692, 264628, 264629, 55811578, 264634, 264555, 264637, 264557, 264638, 18108381, 264558, 18108384, 60432113, 22279000
1401	91226379 (2801, 2802)	Novel Protein sim. GBank gi 3256185 emb CAA15485 - (AL008635) dJ510H16.1 [Homo sapiens]	Contains protein domain (PF00790) - VHS domain		UNCLASSIFIED
1402	95361475 (2803, 2804)	Novel Protein sim. GBank gi 1515427 (U57523) - nei homolog [Homo sapiens]	Contains protein domain (PF00008) - tgf		264768, 21906769, 22279002
1403	94147933 (2805, 2806)	Novel Protein sim. GBank gi 5262615 emb CAB45747.1 - (AL080156) hypothetical protein [Homo sapiens]	EGF-like domain		264693, 33657109, 264634
1404	90935393 (2807, 2808)				55274572, 66712502, 265017, 264448, 264288, 21908765, 21906769, 264693, 55811576, 55274791, 60432113
					UNCLASSIFIED
					55274572, 22278998, 29331822, 29331828, 66712502, 265008, 80433436, 265017, 264693, 18108385

1405	95095068 (2808, 2810)	Novel Protein sim. GBank gi 854085 emb CAA58337 - (X83413) U88 [human herpesvirus 6]			264488, 56994075, 35696286, 29331822, 29331824, 29331826, 29331828, 35696052, 264508, 264908, 264907, 264908, 264510, 264511, 264910, 33857402, 264594, 264758, 264600, 264604, 264762, 18108351, 264764, 33657023, 33857109, 264628, 264634, 83373044, 22279002, 264563, 264482, 264486, 264567
1406	87612369 (2811, 2812)	Novel Protein sim. GBank gi 624076 gb AAC95425.1 - (U42580) contains Pro-rich Px motifs: SPKPP (20X), PEPPA (9X); similar to soybean pro-rich cell wall protein, corresponds to Swiss-Prot Accession Number P13993 [Paramecium bursaria Chlorella virus 1]	collagen		264907, 264605
1407	94129872 (2813, 2814)	Novel Protein sim. GBank gi 2827886 (AF015037) - endonucleotidase A related protein; EOPA related protein [Oryctolagus cuniculus]	UNCLASSIFIED		35696286, 22278999, 264084, 264259, 66714117, 29331826, 29331827, 29331828, 29146498, 264107, 264908, 265006, 265008, 264910, 60433438, 285011, 265017, 18108351, 264448, 264288, 264686, 21906765, 21906769, 264692, 33657109, 18108370, 264628, 263972, 18108374, 35696423, 55811576, 264631, 264557, 264458, 83373044, 18108385, 87168518, 60432113, 22279002
1408	95361477 (2815, 2816)	Novel Protein sim. GBank gi 2564953 (AF030001) - unknown [Mus musculus]	Contains protein domain (PF00008) - EGF-like domain	oncogene	264488, 264489, 35696286, 264108, 264508, 264905, 264509, 264906, 264907, 264908, 264909, 265008, 265009, 264910, 33657402, 264757, 264758, 265011, 264601, 265017, 264760, 264762, 264683, 264685, 264766, 264687, 264689, 21906767, 265021, 264690, 264691, 33657023, 264692, 264693, 33657109, 264628, 264629, 35696423, 35695855, 264631, 264632, 264634, 264635, 264555, 264636, 264637, 264638, 56182323, 264639, 264563, 264564, 264565, 264566, 264567
1409	66644385 (2817, 2818)	Novel Protein sim. GBank gi 2662165 db BAA23714 - (AB007902) HH0712 cDNA clone for KIAA0442 has a 574-bp insertion at position 1474 of the sequence of KIAA0442. [Homo sapiens]			264693
1410	86612587 (2819, 2820)	Novel Protein sim. GBank gi 2493780 sp Q60994 ACR3_MOUSE - 30 KD ADIPOCYTE COMPLEMENT-RELATED PROTEIN PRECURSOR (ACRP30) (ADIPOCYTE SPECIFIC PROTEIN ADIPOQ)	Contains protein domain (PF00386) - C1q domain	complement	29331826, 264112, 264512, 265009, 265010, 264601, 264686, 264789, 21906787, 263974, 264631, 264566

1411	87818641 (2821, 2822)	Novel Protein sim. GBank gij3123155jsgip91343YM3M, CAEL - HYPOTHETICAL 49.0 KD TRP-ASP REPEATS CONTAINING PROTEIN F55F8.5 IN CHROMOSOME I	Contains protein domain (PF00400) - WD domain, G-beta repeat	kinasereceptor	22278995, 22278997, 22278999, 29331822, 60432289, 29331828, 284907, 265017, 265019, 264682, 21906787, 21906788, 21906789, 265020, 284690, 264691, 33657023, 33657109, 27486284, 264628, 263972, 264634, 264558, 18108385
1412	84390919 (2823, 2824)			UNCLASSIFIED	264757
1413	85416559 (2825, 2826)	Novel Protein sim. GBank gij3879121jemb(CAA94370) - (Z70310) predicted using GeneFinder; Similarly to Mouse ankyrin (PIR Acc. No. S37771); cDNA EST EMBL: T01923 comes from this gene; cDNA EST EMBL: D32335 comes from this gene; cDNA EST EMBL: D32723 comes from this gene; cDNA EST E...	Contains protein domain (PF00023) - Ank repeat	homeobox	56994075, 29331822, 3566052, 29331828, 29331830, 284909, 52844045, 264510, 52844296, 85658542, 87188474, 265017, 265018, 264681, 264687, 21906788, 35695917, 265020, 52844150, 264692, 263967, 27486284, 35695763, 264639, 18108387, 264568
1414	94675860 (2827, 2828)	Novel Protein sim. GBank gij3252981 (AF068921) - Ras- binding protein SUR-8 [Mus musculus]	Contains protein domain (PF00560) - Leucine Rich Repeat	UNCLASSIFIED	264682, 264683, 265022, 264636
1415	94326948 (2829, 2830)	Novel Protein sim. GBank gij1871187 (U90439) - unknown protein [Arabidopsis thaliana]			52646365, 56182575, 22278994, 22278995, 56994075, 22278996, 22278997, 22278998, 22278999, 264259, 29331822, 29331824, 29331825, 29331826, 29331827, 29331828, 29146498, 66712502, 29331830, 52644045, 264113, 264511, 33657402, 264757, 21908754, 55811386, 265017, 265018, 265019, 264761, 264683, 264369, 264288, 264886, 264689, 21906786, 21906787, 29148627, 21906769, 55811957, 265020, 265021, 264690, 33657023, 65274620, 52645129, 27486262, 27486264, 60431528, 264829, 35695855, 56182323, 264559, 60432113, 264404, 22278902, 264482

1416	84325977 (2831, 2832)	Novel Protein sim. GBank gi1510657 gb AAD39749.1 AF12305 - (AF123052) MLL seplin-like fusion protein [Homo sapiens]	Contains protein domain (PF00735) - Cell division protein	- struct	18108392, 18108394, 18108397, 18108398, 22278995, 22278998, 35696286, 22278997, 22278998, 22278999, 29331822, 35696052, 29331828, 29146498, 264905, 264907, 284908, 264828, 264909, 264113, 265006, 265007, 265008, 265009, 60170831, 264595, 18108348, 21906754, 87168474, 265010, 265011, 87168559, 265017, 265018, 265019, 264762, 18108351, 264681, 264763, 264682, 264683, 264766, 52644229, 264688, 264689, 21908765, 21906766, 21906767, 29148627, 21906768, 55811957, 29148629, 285020, 52644150, 18108361, 33657023, 18108362, 18108368, 264828, 18108370, 264629, 18108374, 18108379, 55811576, 65274791, 264634, 264636, 56182323, 18108381, 60170394, 18108385, 56526486, 87168518, 22279000 264107, 264448
1417	87826663 (2833, 2834)	Novel Protein sim. GBank gi14958835 dbj BAA78095.1 - (AB027570) suppressor of potassium transport defect 3 [Rattus norvegicus]		ATPase associated	
1418	87594276 (2835, 2836)			UNCLASSIFIED	264259, 264908, 265010, 52644229, 21906764, 21906768, 264690, 264639, 18108388
1419	87757168 (2837, 2838)	Novel Protein sim. GBank gi2072294 (U95097) - mitotic phosphoprotein 43 [Xenopus laevis]		struct	264259, 60432289, 265006, 87168474, 264288
1420	87298628 (2839, 2840)	Novel Protein sim. GBank gi15174421 ref NP_008023.1 pCPNE - copine VI (neuronal)		ATPase associated	29331824, 265007, 264563
1421	94746988 (2841, 2842)	Novel Protein sim. GBank gi13876090 emb CA493459.1 - (Z69635) Similarity to Yeast uridine kinase (SW:URK1_YEAST); cDNA EST EMBL:Z14695 comes from this gene; cDNA EST CEMSE17F comes from this gene; cDNA EST EMBL:D67355 comes from this gene; cDNA EST yk209h1.5 comes from this gen...		kinase	18108358, 18108396, 18108397, 21906766, 18108398, 21908767, 58182575, 21906768, 21906769, 56181686, 55811957, 35695917, 35696286, 22278996, 22278997, 22278998, 22278999, 265021, 265022, 60170615, 264259, 33657023, 29331822, 56182181, 29331824, 66714117, 29331825, 33657109, 29331826, 27486261, 29331828, 35696052, 33657349, 264905, 264509, 20281149, 18108370, 264907, 60431528, 66712502, 263972, 55811576, 35696423, 35695855, 264512, 265007, 60431850, 60432229, 60431735, 56182323, 264558, 60170394, 83373044, 55812038, 264758, 18108385, 21908754, 55811386, 87168518, 87168559, 60432113, 265017, 265018, 265019, 22279002, 55811150, 264563, 264682, 264763, 264448, 264566, 264486, 18108391

1422	88178777 (2843, 2844)	Novel Protein sim. GBank gij4505939jrefjNP_000928.1jpPOLR - polymerase (RNA) II (DNA directed) polypeptide A (220KD)		mapolymerase	56994075, 35696286, 87168559, 55811957, 55811576, 264555, 264557, 87168518
1423	86997762 (2845, 2846)			UNCLASSIFIED	264686, 264489, 264692, 264594, 264603, 265018, 264908
1424	95201610 (2847, 2848)	Novel Protein sim. GBank gij437181 (U02289) - GTPase- activating protein [Caenorhabditis elegans]	Contains protein domain (PF00620) - RhoGAP domain	struct	29331822, 29331825, 29331827, 29146498, 264905, 264906, 264908, 264909, 265007, 264810, 265009, 33109954, 265010, 87168559, 265019, 264768, 264887, 21906765, 21906766, 21906767, 21906768, 29148827, 55811957, 29148829, 265021, 264691, 264692, 56526486, 22279002, 264563
1425	21662314 (2849, 2850)	Novel Protein sim. GBank gij100798iprj[S14959 - proline- rich protein - wheat		UNCLASSIFIED	265007, 264558
1426	94322115 (2851, 2852)	Novel Protein sim. GBank gij2078441 (U56964) - weak similarity to S. cerevisiae intracellular protein transport protein US1 (SP:P25386) [Caenorhabditis elegans]		UNCLASSIFIED	264488, 60424179, 35696286, 22278997, 22278998, 22278999, 264259, 60432049, 29331822, 29331825, 29331827, 56182435, 264910, 60433356, 60433438, 21906754, 265018, 264288, 21906785, 21906766, 21906767, 21906769, 265020, 265022, 33657109, 18108370, 18108376, 264558, 83373044, 18108385, 56526486, 22279002, 264482
1427	91227510 (2853, 2854)	Novel Protein sim. GBank gij5616074jgbjAAD45616.1jAF061943) prolata- derived STE20-like kinase PSK [Homo sapiens]	Contains protein domain (PF00069) - Eukaryotic protein kinase domain	kinase	22278994, 56994075, 22278997, 29331828, 29331830, 264828, 265006, 265007, 265008, 265009, 264683, 264288, 18108354, 21906765, 21906768, 29148829, 33657023, 18108374, 35695855, 83373044, 22279002, 264564
1428	94323008 (2855, 2856)	Novel Protein sim. GBank gij138350spjP28968jVGLX_HSVEB - GLYCOPROTEIN X PRECURSOR		glycoprotein	56181686, 264258, 264907, 265007, 265009, 264595, 265010, 264888, 65274620, 264829, 65274791, 22279002, 264566
1429	87888689 (2857, 2858)			UNCLASSIFIED	264112, 264585, 265017, 265019, 21906765, 263977, 264555
1430	94735021 (2859, 2860)	Novel Protein sim. GBank gij1181619jdbj[BAA11565] - (D82364) a variant of TSC-22 [Gallus gallus]			264094, 29331824, 264591, 264593, 265018, 264681, 21906765, 21906767, 65274620, 55811576, 264639, 87168518, 22279002
1431	80429081 (2861, 2862)	Novel Protein sim. GBank gij5420389jembjCAB46680.1j - (AJ243460) proteophosphoglycan [Leishmania major]		UNCLASSIFIED	264768, 265020, 264691, 264693, 264638
1432	87463004 (2863, 2864)	Novel Protein sim. GBank gij414797 (L18966) - pyruvate dehydrogenase phosphatase [Bos taurus]		phosphatase	18108394, 29146498, 265007, 60433438, 264763, 29148829, 263969
1433	87605403 (2865, 2866)	Novel Protein sim. GBank gij2460316 (AF022147) - uterus- ovary specific putative transmembrane protein [Rattus norvegicus]	Contains protein domain (PF00100) - Zona pellucida-like domain	UNCLASSIFIED	264259, 264510, 264591, 264603, 264565
1434	85713730 (2867, 2868)			UNCLASSIFIED	264682, 264691

1435	94708213 (2869, 2870)	Novel Protein sim. GBank gij3970850[dbj BAA34789.1] - (AB015330) HRIHFB2007 [Homo sapiens]		transcriptfactor	22278997, 22278998, 22278999, 60432049, 264259, 29331822, 29331824, 66714117, 29331826, 33656970, 264508, 264905, 66712502, 29331830, 264909, 265007, 265008, 264910, 265009, 60433356, 60433438, 264598, 21908754, 265010, 265017, 265018, 265019, 18108351, 264762, 264448, 264288, 264769, 21908787, 21906768, 21906769, 265020, 265021, 265022, 264690, 264691, 33657109, 264628, 18108374, 18108376, 55811576, 264636, 60170394, 56182323, 264559, 83373044, 87168518, 60432113, 22279000, 22279002, 264563, 264482, 264565, 263978, 264557, 264559
1436	86635024 (2871, 2872)	Novel Protein sim. GBank gij3183977[emb CAA39515] - (X58044) protein HIFC [Mus musculus]		UNCLASSIFIED	
1437	87631082 (2873, 2874)	Novel Protein sim. GBank gij2496887[sp Q09232 YQ22, CAEEL - HYPOTHETICAL 32.0 KD PROTEIN C09F5.2 IN CHROMOSOME III R31240_1 [Homo sapiens]		UNCLASSIFIED	22278997, 66714117, 29331826, 264907, 56182435, 265009, 18108351, 264692, 264693
1438	85544280 (2875, 2876)	Novel Protein sim. GBank gij1905906 (AD000092) - hypothetical human serine-threonine protein kinase	Contains protein domain (PF00595) - Kinase PDZ domain (Also known as DHR or GLF)		264600, 264601, 264605, 264768, 264769, 264690, 35898423, 264558, 264563, 264566
1439	91231894 (2877, 2878)	Novel Protein sim. GBank gij3876299[emb CAA94892] - (Z71180) similar to BPTIKUNITZ inhibitor domain; cDNA EST EMBL:D68293 comes from this gene; cDNA EST yk448h4.5 comes from this gene; cDNA EST yk249e6.5 comes from this gene; cDNA EST yk448h4.3 comes from this gene [Caenorhabditis...]	Contains protein domain (PF00450) - cathepsin Serine carboxypeptidase		264489, 18108394, 65274572, 56182575, 22278994, 22278996, 35696286, 22278997, 22278998, 22278999, 264259, 60432049, 29331822, 29331824, 60432289, 29331826, 29331827, 29331828, 35696052, 33656970, 264107, 264508, 264509, 264907, 66712502, 29331830, 56182435, 264511, 265006, 265007, 265009, 60432229, 60433438, 264595, 55812038, 55811386, 265011, 265017, 265018, 265019, 18108351, 264448, 18108354, 264288, 18108355, 264767, 21906765, 21906766, 21906767, 21906768, 21906769, 55811957, 35695917, 265020, 265021, 265022, 33657109, 18108370, 18108374, 55810764, 35695855, 264634, 264638, 56182323, 83373044, 18108387, 18108374, 55810764, 35695855, 264634, 87188518, 60432113, 22279000, 264486, 264887, 264259, 264906, 264907, 264908, 264909, 265008, 265010, 265017, 265018, 265019, 18108351, 264369, 265020, 33657023, 33657109, 60431528, 55811576, 264635
1440	87423643 (2879, 2880)	Novel Protein sim. GBank gij2662165[dbj BAA23714] - (AB007902) HH0712 cDNA clone for KIAA0442 has a 574-bp insertion at position 1474 of the sequence of KIAA0442. [Homo sapiens]		UNCLASSIFIED	

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1449	87860859 (2897, 2898)				UNCLASSIFIED	66714117, 264906, 264908, 264591, 264601, 264764, 264632
1450	87456696 (2899, 2900)	Novel Protein sim. GBank gij1707074 (U80450) - M01E11.2 [Caenorhabditis elegans]			UNCLASSIFIED	35686286, 35696052, 265008, 265009, 60170831, 33109954, 264683, 264689, 35696423, 35695855, 56526488
1451	87797970 (2901, 2902)	Novel Protein sim. GBank gij1603041emb CAA10600 - (A1132192) HS1 binding protein 3 [Mus musculus]			UNCLASSIFIED	29331826, 264683, 264693, 263978, 264630
1452	85692899 (2903, 2904)	Novel Protein sim. GBank gij2832906 dij BAA24608.1 - (D89340) dipeptidyl peptidase III [Rattus norvegicus]			peptidase	264681, 33657023, 264629
1453	86130434 (2905, 2906)	Novel Protein sim. GBank gij728831 sp P39188 ALU1_HUMAN - IIII ALU SUBFAMILY J WARNING ENTRY IIII			kinase	264510, 264768
1454	11204696 (2907, 2908)					264556
1455	87797896 (2909, 2910)				UNCLASSIFIED	29331822, 66714117, 29331825, 264905, 29331830, 265006, 265008, 265009, 265011, 265019, 18108351, 21908768, 33857109, 18108376, 264632, 56182323, 87168518
1456	86320218 (2911, 2912)	Novel Protein sim. GBank gij728230 sp P41004 CUT3_SCHPO - CHROMOSOME SEGREGATION PROTEIN CUT3			transport	22278995, 22278996, 22278997, 22278998, 22278999, 29331827, 264107, 265017, 21908765, 21906766, 21906767, 21906769, 29148629, 18108370, 22279000
1457	80076800 (2913, 2914)	Novel Protein sim. GBank gij2246532 (U93872) - ORF 73. contains large complex repeat CR 73 [Kaposi's sarcoma-associated herpesvirus]			UNCLASSIFIED	264107, 264566
1458	87800460 (2915, 2916)	Novel Protein sim. GBank gij5524667 gb AAD44333.1 AF15935 - (AF159356) Munc13-4 protein [Rattus norvegicus]			transport	56182575, 22278999, 60432049, 264259, 29331826, 29331827, 29331828, 264102, 264107, 264110, 265009, 60432229, 265019, 265020, 263972, 263976, 264635, 22278002, 264566
1459	95360920 (2917, 2918)	Novel Protein sim. GBank gij5524667 gb AAD44333.1 AF15935 - (AF159356) Munc13-4 protein [Rattus norvegicus]	Contains protein domain (PF00168) - C2 domain		kinase	22278997, 264259, 29331824, 29331826, 29331827, 29331828, 265017, 265018, 264760, 264682, 264448, 264288, 264766, 265021, 264692, 33657023, 33657109, 35695855, 264566
1460	95354602 (2919, 2920)				UNCLASSIFIED	29331822, 264591, 55811957, 264691, 264693, 65274620
1461	94741513 (2921, 2922)	Novel Protein sim. GBank gij1707274 (U80931) - strong similarity to class-III of pyridoxal-phosphate-dependent aminotransferases [Caenorhabditis elegans]	Contains protein domain (PF00202) - gaba Aminotransferases class-III pyridoxal phosphate			22278997, 29331822, 35696052, 265009, 264758, 265017, 265018, 265019, 264760, 264369, 264687, 21906765, 21906768, 265022, 33657109, 27486261, 264555, 83373044
1462	87732018 (2923, 2924)	Novel Protein sim. GBank gij1770466 emb CAA65912 - (X98259) M-phase phosphoprotein 8 [Homo sapiens]	Contains protein domain (PF00385) - 'chromo' (CH-Rromalin Organization Modifier) domain		UNCLASSIFIED	264555, 264556
1463	88090605 (2925, 2926)				struct	60432049, 264259, 29148499, 264906, 264907, 264512, 265017, 264763, 264766, 18108370, 18108374, 264636, 18108385, 18108388

1464	87620482 (2927, 2928)	Novel Protein sim. GBank gl 3874447 emb CAB02772 (Z81039) predicted using GeneFinder; cDNA EST EMBL:TO1209 comes from this gene; cDNA EST yk278a11.3 comes from this gene; cDNA EST yk308a9.3 comes from this gene; cDNA EST yk308a9.5 com...		UNCLASSIFIED	264569, 22278995, 22278996, 22278997, 22278998, 29331822, 29331824, 29331825, 35696032, 20281100, 264905, 29331830, 264909, 265007, 33657402, 21806754, 265017, 265018, 264882, 264684, 264369, 264288, 264766, 21908765, 21906766, 21906767, 21906769, 35695917, 264691, 33657023, 264692, 35696423, 35695855, 264630, 264631, 264639, 264565
1465	87425192 (2929, 2930)	Novel Protein sim. GBank gl 4569598 db BAA76821.1 (AB023194) KIAA0977 protein [Homo sapiens]		glucoamy/lase	264488, 22278994, 56994075, 60432049, 264259, 56182181, 60432289, 29331827, 52644045, 264511, 265007, 265008, 264596, 55812038, 55811386, 264600, 264602, 265017, 265018, 264604, 265019, 18108351, 18108354, 56181562, 21908769, 265021, 33657023, 33657182, 55811576, 264557, 18108382, 60432113
1466	87606227 (2931, 2932)	Novel Protein sim. GBank gl 2246532 (U93872) - ORF 73, contains large complex repeat CR 73 [Kaposi's sarcoma-associated herpesvirus]		UNCLASSIFIED	264512, 265017, 264689, 264558
1467	87614328 (2933, 2934)	Novel Protein sim. GBank gl 4507241 ref NP_003137.1 pSSRP - structure specific recognition protein 1		struct	264683, 264636
1468	95342862 (2935, 2936)	Novel Protein sim. GBank gl 1906596 (U81788) - kinesin-73 [Drosophila melanogaster]			22278998, 264758, 265018, 265019, 21908769, 265020, 33657109, 22279002
1469	78236174 (2937, 2938)	Novel Protein sim. GBank gl 1906596 (U81788) - kinesin-73 [Drosophila melanogaster]		struct	18108394, 18108397, 18108398, 35696052, 29146499, 265007, 265008, 265009, 265010, 265011, 18108354, 18108365, 18108368, 18108374, 18108381, 18108382, 18108384, 18108388
1470	84990482 (2939, 2940)	Novel Protein sim. GBank gl 5649170 gb AAD43131.2 AF15909 - (AF159092) sy d709613 protein [Homo sapiens]		UNCLASSIFIED	18108394, 18108398, 56182575, 264259, 29331822, 29331824, 29331825, 60432289, 264907, 264909, 265007, 264910, 265009, 264591, 60432229, 60433356, 264595, 60433438, 264758, 33109954, 265010, 265011, 265018, 264760, 264448, 264764, 264288, 264369, 18108357, 264769, 18108358, 21908767, 21908769, 55811957, 265021, 18108361, 264691, 18108362, 18108365, 18108368, 264628, 18108379, 264637, 264557, 18108381, 56182323, 18108382, 83373044, 18108384, 18108388, 87188518, 60432113, 264404, 22279002, 264482, 264567, 264487
1471	87626842 (2941, 2942)	Novel Protein sim. GBank gl 3876146 emb CAB01750 (Z78542) similar to Mitochondrial carrier proteins; cDNA EST EMBL:TO1651 comes from this gene [Caenorhabditis elegans]	Contains protein domain (PF00153) - Mitochondrial carrier proteins	transport	29331822, 29331824, 29331825, 264828, 264603, 264689, 264693, 18108374, 55811576

1472	87756616 (2943, 2944)	Novel Protein sim. GBank gi 4680707 gb AAD27743.1 AF13296 - (AF132968) CGI-34 protein [Homo sapiens]		UNCLASSIFIED	264905, 18108351, 21906765, 264486
1473	87791609 (2945, 2946)	Novel Protein sim. GBank gi 3688780 (AF042180) - testis- specific Y-encoded-like protein [Mus musculus]	Contains protein domain (PF00956) - MHC Nucleosome assembly protein (NAP)		18108394, 22278995, 56994075, 22278999, 29331822, 29331824, 66714117, 29331825, 29331826, 35896052, 264906, 264907, 56182435, 265007, 264758, 265018, 265019, 264760, 264764, 264288, 264685, 264686, 264768, 21906768, 55811957, 265021, 264691, 264693, 264629, 55811576, 264634, 264638, 56182323, 22279002, 264566, 264486
1474	85800989 (2947, 2948)	Novel Protein sim. GBank gi 2494890 sp Q92176 CORO_BOVIN - CORONIN-LIKE PROTEIN P57	Contains protein domain (PF00400) - struct WD domain, G-beta repeat		264488, 35695917, 35696286, 264692, 33657023, 264693, 33657109, 35696052, 264508, 264905, 264906, 264907, 264629, 264908, 264909, 35696423, 35695855, 264511, 264910, 264632, 264634, 264635, 264636, 264637, 264558, 264557, 264639, 264758, 60432113, 264604, 264605, 264565, 264566, 264764, 264488, 264685, 264766, 264681, 264682, 264288, 264568
1475	86671935 (2949, 2950)		Contains protein domain (PF00041) - UNCLASSIFIED Fibronectin type III domain	UNCLASSIFIED	
1476	87548855 (2951, 2952)	Novel Protein sim. GBank gi 4757752 ref NP_004664.1 pANGP - angiopoietin 3	Contains protein domain (PF00147) - Fibrinogen beta and gamma chains, C-terminal globular domain	glycoprotein	60424179, 56181686, 29331824, 60424289, 29331826, 35696052, 264508, 264905, 264906, 264907, 264908, 264909, 264512, 265007, 265008, 265009, 264910, 33657402, 264595, 264596, 55812038, 265011, 264601, 264762, 18108351, 264288, 264389, 264685, 264766, 264689, 55811957, 264691, 264692, 264693, 18108370, 60431528, 18108374, 35696423, 264634, 264635, 264636, 60431850, 264555, 264638, 264557, 264639, 18108382, 18108388, 60432113, 22279002
1477	87774279 (2953, 2954)	Novel Protein sim. GBank gi 2498308 sp Q60870 DP1_MOUSE - POLYPOSIS LOCUS PROTEIN 1 HOMOLOG (TB2 PROTEIN HOMOLOG) (GP106)		UNCLASSIFIED	264259, 264107, 264905, 265008, 265010, 265011, 264682, 264288, 265020, 265021, 263974
1478	11754412 (2955, 2956)				264686

1479	91840140 (2957, 2958)	Novel Protein sim. GBank gi 5499741 gb AAD43978.1 AF15296 - (AF152961) chromatin-specific transcription elongation factor FACT 140 kDa subunit [Homo sapiens]		peptidase	56182575, 22278995, 22278996, 22278998, 22278999, 29331822, 29331824, 66714117, 264906, 264907, 56182435, 265006, 60170831, 33657402, 264758, 33109954, 21906754, 265017, 265019, 264448, 264288, 264767, 264687, 52644229, 21906764, 264689, 21906765, 21906768, 21906769, 265020, 265021, 60170815, 264691, 33657023, 33657109, 33657182, 27486281, 27486282, 33657349, 18108370, 60431528, 263978, 55811576, 264556, 264557, 60170394, 87168518, 264404, 22279000, 22279002, 264563, 264482
1480	94312412 (2959, 2960)	Novel Protein sim. GBank gi 3550456 emb CAA06329.1 - (AJ005073) Alix [Mus musculus]		UNCLASSIFIED	18108394, 65274572, 56182575, 22278995, 35696286, 56994075, 22278996, 22278997, 22278998, 22278999, 264091, 264259, 35696052, 28146499, 264103, 264105, 264108, 264907, 52644045, 264112, 265007, 265008, 265009, 60433356, 60433438, 264596, 33109954, 33657084, 52644296, 87168474, 265010, 87168559, 265017, 265018, 265019, 264448, 264682, 264683, 264769, 21906765, 21906766, 21906767, 21906768, 21906769, 265020, 265021, 60170615, 52644150, 33657109, 33657182, 263972, 35695855, 264557, 263981, 83373044, 18108385, 87168518, 264566, 264089, 264486
1481	87021442 (2961, 2962)	Novel Protein sim. GBank gi 4836807 gb AAD30566.1 AF14679 - (AF146793) PFT27 [Mus musculus]		MHC	265006, 265007, 265010, 18108374
1482	85320442 (2963, 2964)	Novel Protein sim. GBank gi 4565372 gb AAD25403.1 AF12292 - (AF122923) Wnt inhibitory factor-1 [Mus musculus]	Contains protein domain (PF00008) - EGF-like domain	UNCLASSIFIED	264908, 264910, 264758
1483	94115503 (2965, 2966)	Novel Protein sim. GBank gi 535428 (U13736) - calmodulin- like protein [Pisum sativum]	Contains protein domain (PF00036) - EF hand	struct	264259, 29331822, 52645080, 29331825, 29331826, 33656970, 29331830, 265007, 55812038, 33109954, 265017, 264288, 21906768, 21906769, 264636, 18108380, 87168518, 22279000
1484	94131544 (2967, 2968)	Novel Protein sim. GBank gi 1911774 bbs 180090 - (S63384) putative Rab5-interacting protein (clone L1-57) [human, HeLa cells, Peptide Parlia, 122 aa] [Homo sapiens]		UNCLASSIFIED	264489, 35696286, 264259, 264107, 264909, 265008, 60433356, 33657402, 60433438, 264288, 21906765, 21906766, 29148627, 33657023, 27486262, 18108374, 35696423, 83373044, 60432113
1485	80194441 (2969, 2970)	Novel Protein sim. GBank gi 5360129 gb AAD42883.1 AF15511 - (AF155117) NY-REN 62 antigen [Homo sapiens]	Contains protein domain (PF00225) - Kinesin motor domain	struct	264369, 265020, 18108374

1486	94125066 (2871, 2972)	Novel Protein sim. GBank gi 4589516 d j BAA76780.1 - (AB023153) KIAA0936 protein [Homo sapiens]	Contains protein domain (PF00089) - Eukaryotic protein kinase domain	Kinase	56182575, 22278999, 264906, 264907, 21908754, 87168474, 265017, 265019, 18108351, 264288, 265020, 264566, 21908754, 264486
1487	86452711 (2973, 2974)	Novel Protein sim. GBank gi 5019275 emb CAB44431.1 - (A1132751) xenobiotic/medium-chain fatty acid:CoA ligase form XL-III [Bos taurus]		synthase	
1488	87732026 (2975, 2976)	Novel Protein sim. GBank gi 5712131 gb AAD47379.1 AF12049 - (AF120499) DEM1 protein [Homo sapiens]	Contains protein domain (PF01443) - Viral (Superfamily 1) RNA helicase	IgI	264686, 264769, 264689, 264692, 264693, 264509, 264906, 264907, 18108370, 264908, 264629, 264909, 264510, 265006, 264512, 265007, 265008, 265009, 264555, 264556, 264557, 264558, 264762, 264564, 264682
1489	95104277 (2977, 2978)	Novel Protein sim. GBank gi 2497303 sp Q62786 FPRP_RAT - PROSTAGLANDIN F2-ALPHA RECEPTOR REGULATORY PROTEIN PRECURSOR (PROSTAGLANDIN F2-ALPHA RECEPTOR ASSOCIATED PROTEIN)	Contains protein domain (PF00047) - Immunoglobulin domain	prostaglandin	21908767, 22278999, 265022, 264259, 264693, 29331824, 29331825, 29331826, 29331827, 29331828, 264103, 263972, 66712502, 35696423, 35695855, 265007, 265008, 265009, 83373044, 21908754, 56526486, 265017, 264563, 18108351, 264564, 264566, 264369, 264288
1490	87390127 (2979, 2980)			UNCLASSIFIED	56182575, 264259, 29331822, 29331824, 66714117, 29331827, 29331828, 264508, 264905, 66712502, 265007, 265008, 264594, 33657402, 55812038, 87168474, 265018, 18108351, 264369, 264288, 264769, 264689, 21908767, 21906768, 55811957, 60170615, 33657109, 35695855, 264635, 60170394, 56526486, 22279002, 264563
1491	83594305 (2981, 2982)	Novel Protein sim. GBank gi 295671 (L11275) - selected as a weak suppressor of a mutant of the subunit AC40 of DNA dependant RNA polymerase I and III [Saccharomyces cerevisiae]		UNCLASSIFIED	265007, 264448, 18108372, 264558, 56182323
1492	83605363 (2983, 2984)	Novel Protein sim. GBank gi 1656005 (U71205) - rit [Mus musculus]	Contains protein domain (PF00071) - Ras family	oncogene	22278997, 22278998, 29331822, 264907, 66712502

1493	91677215 (2985, 2986)	Novel Protein sim. GBank gll569515[dbj]BAA83041.1] - (AB029012) KIAA1089 protein [Homo sapiens]		UNCLASSIFIED	264488, 52646365, 65274572, 56182575, 22278994, 35696286, 56994075, 22278999, 60432049, 29331824, 29331828, 35696052, 264508, 264905, 264908, 52844045, 264909, 56182435, 265006, 265008, 265009, 60170831, 33657402, 55812038, 265010, 265011, 265017, 265018, 265019, 55811150, 264448, 264682, 264685, 264686, 52844229, 21908765, 21908766, 21908768, 21908769, 265020, 265021, 60170815, 52644150, 33657023, 18108364, 18108365, 33657109, 33657182, 27486261, 27486262, 27486264, 33657348, 27486265, 35695763, 18108370, 264629, 18108374, 52844332, 56182323, 87168518, 22279002, 264564, 264566, 264567
1494	87605265 (2987, 2988)	Novel Protein sim. GBank gll728832[sp]P39189[ALU2_HUMAN - IIII ALU SUBFAMILY SB WARNING ENTRY IIII	Contains protein domain (PF01352) - kinase KRAB box		264907, 265009, 264769, 18108370, 55811576, 264639, 264565, 264488
1495	87605267 (2989, 2990)	Novel Protein sim. GBank gll4589588[dbj]BAA76816.1] - (AB023189) KIAA0972 protein [Homo sapiens]	Contains protein domain (PF01352) - kinase KRAB box		22278997, 264259, 264906, 264907, 265009, 264594, 33657084, 265017, 264760, 264448, 33657109, 264630, 264634, 56526486, 264563, 264565, 264566, 264486, 264567
1496	87784322 (2991, 2992)	Novel Protein sim. GBank gll5420387[emb]CAB46679.1] - (AJ243459) proteophosphoglycan [Leishmania major]	UNCLASSIFIED		35696286, 264908, 265019, 264693
1497	81695428 (2993, 2994)	Novel Protein sim. GBank gll3874925[emb]CAA92591] - (Z58298) Similarity to Mouse A-RAF proto-oncogene serine/threonine-protein kinase (SW:KRAA_MOUSE); cDNA EST EMBL:D27610 comes from this gene; cDNA EST EMBL:T01018 comes from this gene; cDNA EST EMBL:D33256 comes from this gene....	Contains protein domain (PF00069) - kinase Eukaryotic protein kinase domain		264910, 264758, 265011, 264764, 264288, 264690, 264634, 264635, 56526486
1498	90934938 (2995, 2996)	Novel Protein sim. GBank gll728836[sp]P39193[ALU6_HUMAN - IIII ALU SUBFAMILY SP WARNING ENTRY IIII		oncogene	264488, 65274572, 29331822, 265017, 265018, 21905765, 29148627, 29148629, 18108374, 264637, 264638, 264567
1499	88451589 (2997, 2998)	Novel Protein sim. GBank gll2570198 (U54556) - microfilament sheath protein SHP3 [Litomosoides sigmodontis]		glucoamylase	263978, 264568
1500	80499386 (2999, 3000)	Novel Protein sim. GBank gll2078483 (U43200) - antifreeze glycoprotein precursor [Boreogadus saidae]		UNCLASSIFIED	22278999, 264769, 18108379
1501	85795297 (3001, 3002)			UNCLASSIFIED	264559
1502	80206141 (3003, 3004)				264508, 264112, 264604, 264684, 52644150, 55811576, 264632, 264556, 264638, 56182323, 264563, 264486
1503	87012701 (3005, 3006)	Novel Protein sim. GBank gll3900855 (AC004874) - similar to N-acetylgalactosaminyltransferase, similar to Q07537 (PID:g1171989) [Homo sapiens]	Contains protein domain (PF00535) - transferase Glycosyl transferases		29331822, 265007, 264369

1504	79640051 (3007, 3008)		Contains protein domain (PF00023) - Ank repeat	UNCLASSIFIED	264693
1505	86102672 (3008, 3010)	Novel Protein sim. GBank gij4753773jemb CAB41970.1 - (AJ132545) protein kinase [Homo sapiens]	Contains protein domain (PF00069) - Eukaryotic protein kinase domain	kinase	29331826, 35696052, 264509, 264906, 264907, 264908, 264909, 264511, 264910, 55812038, 264759, 264763, 264764, 264689, 35695917, 265022, 33657109, 18108374, 264631, 264635, 264638, 264568
1506	94143219 (3011, 3012)	Novel Protein sim. GBank gij1304201 dbj BAA06170 - (D29766) alternatively spliced product [Rattus norvegicus]	Contains protein domain (PF00018) - SH3 domain	glycoprotein	65274572, 56182575, 56994075, 22278997, 22278998, 22278999, 264091, 264092, 60432049, 264259, 52645080, 29331822, 29331827, 264106, 29331830, 264908, 56182435, 264110, 264511, 264512, 55812038, 21906754, 87168559, 264600, 265017, 265018, 264681, 18108354, 264369, 264687, 264689, 21906765, 29148627, 21906768, 21906769, 29148629, 52644150, 33657023, 18108376, 65274791, 56182323, 264558, 264559, 18108385, 87168518, 60432113, 22279000, 264565
1507	83738250 (3013, 3014)	Novel Protein sim. GBank gij5689513 dbj BAA83040.1 - (AB029011) KIAA1088 protein [Homo sapiens]		helicase	264639
1508	11618758 (3015, 3016)				264593
1509	87318451 (3017, 3018)	Novel Protein sim. GBank gij5031975 ref NP_005875.1 pPAK4 - protein kinase related to S. cerevisiae STE20, effector for Cdc42Hs	Contains protein domain (PF00069) - Eukaryotic protein kinase domain	kinase	264259, 29331822, 29331824, 29331828, 264591, 33109954, 264563
1510	95362643 (3019, 3020)	Novel Protein sim. GBank gij113161 sp P28614 ACOR_ALCEU - ACETON CATABOLISM REGULATORY PROTEIN		UNCLASSIFIED	264259, 29331822, 265007, 18108374, 264556
1511	88318073 (3021, 3022)	Novel Protein sim. GBank gij728831 sp P39188 ALU1_HUMAN - IIII ALU SUBFAMILY J WARNING ENTRY IIII		UNCLASSIFIED	264259, 29331822, 29331824, 29331827, 264509, 264907, 264510, 264511, 265007, 264512, 265008, 87168559, 264288, 265022, 33657023, 35695855, 264637, 264638, 264563
1512	95345390 (3023, 3024)	Novel Protein sim. GBank gij4559353 gb AAD23014.1 AC00658 - (AC006585) putative extragenic suppressor protein [Arabidopsis thaliana]	Contains protein domain (PF01163) - RIO1/ZK632.3/MJ0444 family		52645156, 18108396, 56994075, 60432289, 265006, 60433356, 60433438, 21908754, 87168474, 87168559, 265018, 264762, 264783, 264887, 21906765, 21906769, 27486262, 35695763, 18108374, 35696423, 264555, 18108385, 18108387, 18108388, 87168518, 264482
1513	87436228 (3025, 3026)	Novel Protein sim. GBank gij1330394 (U58761) - C01F1.6 gene product [Caenorhabditis elegans]			35696052, 264905, 264906, 264907, 264908, 264909, 264910, 264591, 264766, 264689, 264692, 264629, 264636

1514	95345392 (3027, 3028)	Novel Protein sim. GBank gi 459353 gb AAD23014.1 AC006585 - (AC006585) putative extragenic suppressor protein [Arabidopsis thaliana]	Contains protein domain (PF01163) - RIO1/ZK632.3/MJ0444 family	UNCLASSIFIED	52644507, 52645156, 52646365, 52646842, 65274572, 22278994, 35696286, 56994075, 264259, 52645080, 29331822, 29331825, 35696052, 29331830, 52644045, 58182435, 265006, 60433358, 60433438, 5812038, 21906754, 52646317, 52644296, 87168474, 87168559, 284448, 52844229, 21906765, 21906768, 21906767, 21908768, 35695917, 265020, 52644150, 33857023, 52645129, 33657109, 33657182, 27486261, 27486282, 27486284, 27486285, 35695763, 18108376, 35696423, 35695855, 52644332, 18108385, 18108387, 87168518, 60432113 265020, 264639
1515	79163536 (3028, 3030)	Novel Protein sim. GBank gi 387950 emb CAA87795 - (Z47812) similar to ubiquitin carboxyl-terminal hydrolase; cDNA EST EMBL:D33366 comes from this gene; cDNA EST EMBL:D33965 comes from this gene; cDNA EST EMBL:D33822 comes from this gene; cDNA EST EMBL:D34547 comes from this ge...	ubiquitin		
1516	86073539 (3031, 3032)	Novel Protein sim. GBank gi 498015 (L27479) - X123 [Homo sapiens]		UNCLASSIFIED	265008, 56182323, 22279002
1517	87793325 (3033, 3034)	Novel Protein sim. GBank gi 3415134 (AF082024) - Phyb1 [Pimpinella brachycarpa]			264091, 18108370, 264404
1518	87350697 (3035, 3036)	Novel Protein sim. GBank gi 728838 sp P39195 ALU8_HUMAN - IIII ALU SUBFAMILY SX WARNING ENTRY IIII	Im7		56714117, 264508, 264509, 264905, 264510, 264910, 264591, 264595, 264288, 264766, 264769, 18108374, 264636, 264638, 264486
1518	94328689 (3037, 3038)	Novel Protein sim. GBank gi 526268 emb CAB45771.1 - (AL080198) hypothetical protein [Homo sapiens]			264569, 284489, 60432049, 265009, 33657402, 264596, 21906754, 265019, 264369, 21906765, 21906768, 21906769, 264691, 65274620, 33657182, 27486281, 18108374, 264557, 264639, 87168518, 22279002
1520	87592855 (3038, 3040)	Novel Protein sim. GBank gi 266216 dbj BAA23712 - (AB007900) HI0452 cDNA clone for KIAA0440 has a 438- bp insertion at position 1711 of the sequence of KIAA0440. [Homo sapiens]		UNCLASSIFIED	18108392, 60432049, 264259, 29331824, 265007, 60433356, 265010, 21906768, 264636
1521	86970696 (3041, 3042)	Novel Protein sim. GBank gi 5052351 gb AAD38518.1 AF13542 - (AF135421) GDP- mannose pyrophosphorylase B [Homo sapiens]	Contains protein domain (PF00483) - Nucleotidyl transferase	synthase	18108394, 264259, 66714117, 265011, 264603, 265019, 18108364, 35696423, 264557, 264558, 18108388
1522	78960687 (3043, 3044)	Novel Protein sim. GBank gi 3776567 (AC005388) - Strong similarity to F21B7.33 gi 2809264 from A. thaliana BAC gBAC002560. EST gb N65119 comes from this gene. [Arabidopsis thaliana]		UNCLASSIFIED	29331824, 265018, 265020, 265021
1523	91005151 (3045, 3046)			UNCLASSIFIED	65274572, 21906768, 264693
1524	80203723 (3047, 3048)				
1525	87798867 (3049, 3050)	Novel Protein sim. GBank gi 4759040 ref NP_004283.1 pRIN1 - ras inhibitor		UNCLASSIFIED	264112, 21906754, 263974
				UNCLASSIFIED	264683, 264687, 264689, 264690, 264692, 264693

1526	95105344 (3051, 3052)	Novel Protein sim. GBank gi 728650 sp P08640 JAMYH_YEAST - GLUCOAMYLASE S1/S2 PRECURSOR (GLUCAN 1,4-ALPHA- GLUCOSIDASE) (1,4-ALPHA-D-GLUCAN GLUCOHYDROLASE)		glycoprotein	3569286, 56182181, 60431735, 264595, 55812038, 264605, 264683, 21906785, 55811957, 265020, 65274791, 264555, 264556, 264557, 264558, 264559, 83373044
1527	88262512 (3053, 3054)	Novel Protein sim. GBank gi 2792486 (AF041107) - tulip 2 [Rattus norvegicus]			56182575, 264259, 60432049, 29331822, 60432289, 264908, 66712502, 60433438, 87169559, 265017, 264288, 21906768, 21906769, 263977, 55811576, 56182323, 18108381
1528	94130918 (3055, 3056)			UNCLASSIFIED	22278995, 22278997, 264259, 66712502, 264596, 265017, 265019, 264682, 264448, 264683, 264764, 264685, 264686, 21906765, 21906766, 21906767, 21906768, 21906769, 265022, 264693, 83373044, 18108385
1529	94120793 (3057, 3058)	Novel Protein sim. GBank gi 4406663 gb AAD20053 - (AF131826) Unknown [Homo sapiens]		UNCLASSIFIED	264488, 263994, 56182575, 22278995, 3569286, 22278997, 264259, 29331822, 60432289, 29331827, 3569052, 264509, 264906, 264907, 264908, 264909, 5284045, 56182435, 264511, 265009, 264910, 60433356, 60433438, 265017, 265018, 264760, 264448, 264764, 264369, 264288, 264768, 18108357, 264768, 52644228, 21906765, 21906766, 21906767, 21906768, 265021, 265022, 52644150, 33657109, 264629, 35695855, 60432113, 22278002, 264583, 264584, 264488, 264567
1530	95012765 (3059, 3060)	Novel Protein sim. GBank gi 2828710 (AF043642) - malin cyclophilin [Rattus norvegicus]			264488, 264489, 35696286, 29331825, 35696052, 264508, 264905, 264906, 264907, 264909, 264510, 264511, 264512, 264910, 264592, 264595, 18108351, 264764, 264683, 264684, 264766, 264768, 18108357, 264769, 35695917, 264628, 264629, 18108374, 35695855, 264630, 264631, 264634, 264555, 264636, 264637, 264404, 264583, 264586, 264488
1531	95418351 (3061, 3062)	Novel Protein sim. GBank gi 1905874 (U90878) - carboxyl terminal LIM domain protein [Homo sapiens]	Contains protein domain (PF00596) - PDZ domain (Also known as DHR or GLGF).	kinase	56182575, 35696286, 264097, 264259, 29331822, 29331825, 29331826, 29331827, 35696052, 264509, 56182435, 264510, 264511, 265007, 60433356, 55811386, 264681, 264369, 264288, 264766, 264687, 55811957, 35695917, 33657023, 35695763, 55810764, 35696423, 55811576, 263981, 60170394, 56182323, 83373044, 60432113, 264586

1532	85718224 (3063, 3064)	Novel Protein sim. GBank gi 3874716 emb CAA91265 - (Z66494) cDNA EST EMBL:D65271 comes from this gene; cDNA EST EMBL:D64845 comes from this gene; cDNA EST EMBL:D64449 comes from this gene; cDNA EST EMBL:D67438 comes from this gene; cDNA EST EMBL:D68087 comes from this gene; cDN...		UNCLASSIFIED	264689	
1533	94239830 (3065, 3066)	Novel Protein sim. GBank gi 140324 emb CAB01543 - (Z78141) unknown [Mus musculus]		struct	29331824, 29146499, 264907, 264112, 265008, 265011, 265017, 265018, 264762, 18108351, 263967, 20281149, 18108374, 263981, 264566	
1534	95343941 (3067, 3068)	Novel Protein sim. GBank gi 81286 pir S22697 - extensin - Volvox carter (fragment)		UNCLASSIFIED	264905, 264907, 264766, 264637	
1535	90936732 (3069, 3070)				65274572, 22278997, 264259, 60432049, 29331822, 60432289, 29331827, 29146499, 265006, 265008, 60170831, 60433438, 33109954, 87168559, 265018, 18108357, 21906768, 29146629, 265021, 265022, 18108377, 58182323, 60432113, 22279000, 22279002	
1536	87602858 (3071, 3072)	Novel Protein sim. GBank gi 108024 pir B32891 - finger protein 2, placental - human	Contains protein domain (PF00096) - Zinc finger, C2H2 type	transcript factor	264686, 18108357, 18108394, 21906767, 21906768, 29146629, 35698286, 265020, 265021, 52644150, 264693, 66714117, 29331825, 29331826, 264508, 264905, 20281149, 264909, 18108374, 35696423, 35695855, 265009, 264634, 264636, 264638, 18108385, 56526486, 265017, 265018, 264563, 264762, 18108351, 264448, 264369, 264766	
1537	95354556 (3073, 3074)	Novel Protein sim. GBank gi 3876332 emb CAB02096 - (Z79754) cDNA EST EMBL:T01054 comes from this gene; cDNA EST EMBL:D73600 comes from this gene; cDNA EST yk426112.5 comes from this gene; cDNA EST yk342110.5 comes from this gene; cDNA EST yk475c5.5 comes from this gene; cDNA ES...			65274572, 56182575, 60432049, 264259, 29331826, 265006, 265007, 60433356, 60433438, 264601, 18108351, 264448, 264369, 264288, 33657023, 65274820, 33657109, 60432113	
1538	85724628 (3075, 3076)	Novel Protein sim. GBank gi 403440 (M81787) - [Gallus domesticus skeletal muscle mRNA, partial cds], gene product [Gallus gallus]	Contains protein domain (PF00069) - Eukaryotic protein kinase domain	kinase	18108394, 18108397, 264909, 265008, 265009, 265010, 18108351, 264838, 18108382, 18108385, 18108388	

1539	95337628 (3077, 3078)	Novel Protein sim. GBank gij3218411emb[CAA19375.1] - (AL023859) SPBC19C7.07c, putative IRNA splicing endonuclease ga mima subunit, len:284aa, similar eg. to YAR008W, YAH8_YEAST, P39707, YAR008W, IRNA, splicing endonuclease gamma subunit, (275aa), fasta scores, opt:269, E()0.6e-2...		nuclease	22278994, 22278996, 35696286, 56994075, 22278997, 22278998, 22278999, 60432049, 264259, 29331822, 29331824, 60424269, 29331825, 60432289, 29331826, 29331827, 29331828, 35696052, 35658970, 56182435, 265009, 33657402, 60433356, 60433438, 55812038, 21906754, 87168559, 265017, 265018, 265019, 18108351, 264288, 52644229, 18108359, 21906764, 21906767, 21906768, 35695917, 265020, 265021, 52644150, 33657023, 33657109, 27486261, 18108370, 18108376, 35696423, 55811576, 65274791, 264558, 56182323, 60170394, 83373044, 87168518, 60432113, 22278000, 22279002, 264566
1540	95352858 (3079, 3080)	Novel Protein sim. GBank gij5052634[gb AAD38647.1 AF145672] - BCDNA GH12174 [Drosophila melanogaster]		UNCLASSIFIED	264368, 264691, 263978
1541	95317848 (3081, 3082)	Novel Protein sim. GBank gij5052349[gb AAD38515.1 AF135016] protein phosphatase 2A 48 kDa regulatory subunit [Homo sapiens]		phosphatase	264488, 264489, 22278999, 264259, 29331822, 35696052, 264508, 264509, 264905, 264907, 264908, 264511, 264512, 264910, 264592, 264761, 264762, 264448, 264764, 264288, 264687, 21906769, 55811937, 35695917, 265020, 264691, 33657023, 264692, 33657109, 264628, 18108374, 264632, 264634, 264635, 264639, 18108385, 264563, 264564, 264565, 264566, 264486
1542	80937549 (3083, 3084)	Novel Protein sim. GBank gij505702[gb AAD41779.1 AF12686] - (AF126867) calpain-like protease [Mus musculus]		calhepsin	18108392, 18108394, 65274572, 29331822, 264508, 265007, 265008, 265009, 265011, 264682, 18108354, 18108355, 52644150, 18108368, 264636, 18108381, 18108382
1543	84348768 (3085, 3086)	Novel Protein sim. GBank gij728832[sp P39189 ALU2_HUMAN - IIII ALU SUBFAMILY SB WARNING ENTRY IIII]		nuclease	264106, 33103954, 265019, 264683, 35695917, 264690, 264692, 33657109
1544	87757295 (3087, 3088)	Novel Protein sim. GBank gij3493162 (AF084259) - bromodomain-containing protein BP75 [Mus musculus]	Contains protein domain (PF00439) - Bromodomain	nucd_recp	35696286, 56994075, 22278999, 35696052, 60433356, 60433438, 265011, 264683, 33657109, 35696423, 264631, 87168518, 22279000
1545	85757973 (3089, 3090)	Novel Protein sim. GBank gij1086591 (U41007) - similar to S. cerevisiae nuclear protein SNF2 (SP:P22082) in a region of gly-arg repeats [Caenorhabditis elegans]		UNCLASSIFIED	264112, 264692, 264693, 55811576
1546	78476569 (3091, 3092)			UNCLASSIFIED	264905, 264686
1547	86899594 (3093, 3094)	Novel Protein sim. GBank gij2661132 (AF035683) - p21 [Mus musculus]		UNCLASSIFIED	264259, 29331822, 66714117, 265007, 55811386, 265010, 264600, 265017, 265019, 264288, 264768, 265020, 265022, 55811576, 18108380, 264563

1548	94233065 (3095, 3096)	Novel Protein sim. GBank gij3043692[dbj BAA25510] - (AB011156) KIAA0584 protein [Homo sapiens]		UNCLASSIFIED	29331824, 60431528, 264639, 56182323
1549	95330048 (3097, 3098)	Novel Protein sim. GBank gij5689519[dbj BAA83043.1] - (AB029014) KIAA1091 protein [Homo sapiens]		eph	60424179, 22278995, 35696286, 22278998, 22278999, 264092, 264094, 29331822, 56182181, 29331824, 35696052, 264905, 264906, 264908, 264909, 265006, 264511, 265008, 60431735, 60433356, 21908754, 55811386, 87168559, 265017, 265018, 265019, 55811150, 264682, 264288, 264369, 56181562, 264769, 21908765, 21908768, 21906769, 55811957, 265020, 264691, 33657109, 60431528, 35696423, 35695855, 56526486, 60432113, 22279002, 264563, 264568
1550	95201907 (3099, 3100)	Novel Protein sim. GBank gij544463[sp P35350 GUSB_BOVIN - POSSIBLE GUSTATORY RECEPTOR TYPE B (PPR1 PROTEIN)]	Contains protein domain (PF00001) - 7 transmembrane receptor (rhodopsin family)	Im7	65274572, 60432289, 265008, 264910, 265011, 265017, 265019, 264768, 56182323
1551	88077111 (3101, 3102)	Novel Protein sim. GBank gij4758566[ref NP_004798.1 phS6S - heparan-sulfate 6-sulfotransferase]		UNCLASSIFIED	22278999, 29331822, 264508, 264509, 264906, 264907, 264908, 265007, 264512, 264910, 21906754, 265018, 265019, 264681, 264764, 264766, 264688, 264769, 21906769, 264692, 35695763, 264635, 264555, 264556, 264557, 264638, 264558, 264563
1552	87617114 (3103, 3104)			UNCLASSIFIED	264259, 29331828, 66712502, 264764, 264288, 264686, 33657109, 264556
1553	94725512 (3105, 3106)	Novel Protein sim. GBank gij4589570[dbj BAA76807.1] - (AB023180) KIAA0963 protein [Homo sapiens]	Contains protein domain (PF00304) - Gamma-thionins family	dehydrogenase	56182575, 35696286, 29146499, 264509, 264907, 264908, 264909, 56182435, 265006, 265008, 265009, 264910, 264757, 264758, 265017, 55811150, 18108351, 264764, 56181562, 35695917, 264693, 33657109, 18108374, 35696423, 65274791, 35695855, 264635, 264555, 56182323, 18108382, 83373044, 22279000
1554	94233069 (3107, 3108)	Novel Protein sim. GBank gij3043692[dbj BAA25510] - (AB011156) KIAA0584 protein [Homo sapiens]	Contains protein domain (PF00446) - Gonadotropin-releasing hormones	transferase	35696286, 22278997, 264259, 29331822, 29331824, 29331825, 29331828, 265007, 265009, 60432229, 33657402, 55812038, 265011, 265019, 264681, 264369, 264686, 264767, 264768, 21906765, 21906769, 35695917, 264693, 18108370, 60431528, 55811576, 264631, 60170394, 56182323, 83373044, 18108385, 22279000, 22279002

1555	67332970 (3109, 3110)	Novel Protein sim. GBank gjl2257495[dj]BAA21392] - (AB004534) p1015 [Schizosaccharomyces pombe]	Contains protein domain (PF00400) - WD domain, G-beta repeat	UNCLASSIFIED	264259, 29331826, 35696052, 264508, 264905, 264906, 264907, 264908, 52644045, 264909, 264910, 604332229, 60433356, 55812038, 264758, 264759, 33657084, 265011, 87168559, 264601, 265018, 265019, 264763, 264764, 264288, 264766, 264768, 21906765, 35695917, 265022, 264691, 33657023, 35696423, 35695855, 264635, 264555, 264636, 264638, 264639, 18108365, 56526486
1556	91228268 (3111, 3112)			UNCLASSIFIED	83373044, 264758, 265022, 264600, 35696052, 264630, 35696423, 265018, 264632, 264682, 29331822, 265020, 265011, 60432289, 264509, 264908, 264907, 264908, 264909, 264910, 264758, 55811386, 264761, 264762, 264766, 264769, 264690, 263978, 264634, 264635, 264639, 264564, 264486
1557	87640609 (3113, 3114)	Novel Protein sim. GBank gjl3329611 (AF078783) - contains similarity to C3HC4-type zinc fingers (Pfam; zfc3HC4.hmm, score: 34.08); most similar to drosophila goliath protein (SW: Q06003) [Caenorhabditis elegans]	Contains protein domain (PF00097) - Zinc finger, C3HC4 type (RING finger)	UNCLASSIFIED	22278994, 22278996, 22278997, 22278998, 22278999, 60432049, 264259, 29331824, 29331825, 29331826, 29331827, 264908, 264909, 60433356, 21906754, 265017, 265018, 264448, 21906767, 265021, 265022, 33657023, 33657109, 18108370, 55811576, 83373044, 87168518, 22279000, 22279002
1558	94840378 (3115, 3116)	Novel Protein sim. GBank gjl5360105[g]AAD42871.1(AF155105) putative zinc finger protein NY-REN-34 antigen [Homo sapiens]			264259, 29331822, 60432289, 35696032, 264107, 264110, 21906754, 33109954, 87168559, 264760, 264763, 21906764, 21906765, 21906769, 265021, 264690, 35695855
1559	88224865 (3117, 3118)	Novel Protein sim. GBank gjl112908[sp]P02750[A2GL_HUMAN - LEUCINE-RICH ALPHA-2-GLYCOPROTEIN (LRG)]	Contains protein domain (PF00360) - Leucine Rich Repeat	glycoprotein	264908, 264603, 264638
1560	84580675 (3119, 3120)	Novel Protein sim. GBank gjl3980146[emb]CAA92704] - (Z68319) Similarity to Human hnRNP F protein (PIR Acc. No. S43484); cDNA EST EMBL:D34218 comes from this gene; cDNA EST EMBL:D37248 comes from this gene; cDNA EST EMBL:D71817 comes from this gene; cDNA EST EMBL:D74531 comes from...		UNCLASSIFIED	
1561	86609159 (3121, 3122)			UNCLASSIFIED	264510, 264594
1562	83359682 (3123, 3124)			UNCLASSIFIED	263967
1563	85508694 (3125, 3126)			UNCLASSIFIED	264910, 264764, 264766
1564	87766371 (3127, 3128)	Novel Protein sim. GBank gjl1168287[sp]P45953[ACDV_RAT - ACYL-COA DEHYDROGENASE, VERY-LONG-CHAIN SPECIFIC PRECURSOR (VLCAD)]	Contains protein domain (PF00441) - Acyl-CoA dehydrogenase	UNCLASSIFIED	18108394, 35696286, 264259, 29331822, 60432289, 35696052, 29331828, 264508, 66712502, 264908, 56182435, 265007, 264910, 60170831, 21906754, 265011, 265017, 265018, 265019, 18108351, 264448, 264288, 264686, 21906765, 21906768, 265021, 60170615, 264692, 35696423, 35695855, 264557, 56182323, 60432113, 22279002, 264482

1565	87783381 (3129, 3130)	Novel Protein sim. GBank gij129728jplP05307[POI, BOVIN - PROTEIN DISULFIDE ISOMERASE PRECURSOR (PDI)] (PROLYL 4-HYDROXYLASE BETA SUBUNIT) (CELLULAR THYROID HORMONE BINDING PROTEIN) (P55)		isomerase	264488, 264689, 18108398, 55811957, 264534, 264259, 264508, 264905, 264509, 264908, 18108372, 264510, 264511, 264512, 265008, 264630, 265009, 264910, 264635, 264638, 264591, 264555, 264592, 264637, 264593, 264594, 264595, 264596, 265011, 264603, 22279002, 18108351, 264762, 264565, 264567
1566	87424749 (3131, 3132)	Novel Protein sim. GBank gij3880445[embjCAA20329] - (AL031266) VM106R.1 [Caenorhabditis elegans]		inf	22278996, 22278999, 264259, 29331822, 29331824, 60432289, 29331827, 66712502, 264908, 265008, 18108351, 52644229, 21908765, 21908767, 21908768, 21908769, 33657109, 264555, 264639, 264482, 56182575, 21908769, 264692
1567	84999008 (3133, 3134)	Novel Protein sim. GBank gij4929699[gbjAAD34110.1]AF15187 - (AF151873) CGI-115 protein [Homo sapiens]		UNCLASSIFIED	
1568	87648761 (3135, 3136)	Novel Protein sim. GBank gij4827083[refjNP_005072.1]pZNF1 - zinc finger protein 142 (clone pHz-49)	Contains protein domain (PF00096) - Zinc finger, C2H2 type	transcription factor	29331827, 29331830, 264511, 265009, 264758, 21908767, 21908768, 264691, 264693, 22279000, 22279002
1569	90936668 (3137, 3138)	Novel Protein sim. GBank gij5689451[dbjBAA83009.1] - (AB028980) KIAA1057 protein [Homo sapiens]	Contains protein domain (PF00443) - ubiquitin Ubiquitin carboxyl-terminal hydrolase family 2	ubiquitin	65274572, 29331822, 29331824, 29331828, 264905, 56182435, 265007, 265019, 264764, 21908765, 21908769, 55811957, 60170615, 52644150, 264692, 33657023, 33657109, 18108377, 264563, 264567
1570	86843981 (3139, 3140)	Novel Protein sim. GBank gij1255430 (U53155) - No definition line found [Caenorhabditis elegans]		UNCLASSIFIED	264595, 264682, 265021
1571	91210340 (3141, 3142)	Novel Protein sim. GBank gij4507731[refjNP_001061.1]pTUBG - tubulin, gamma polypeptide	Contains protein domain (PF00091) - tubulin Tubulin/FtsZ family	tubulin	22278996, 35696286, 22278997, 264091, 264259, 29331824, 29331825, 29331827, 35696052, 264508, 264905, 56182435, 264510, 265007, 264758, 265011, 18108351, 264448, 264288, 264369, 21908765, 21908767, 21908768, 21908769, 35695917, 265020, 265021, 33657023, 264693, 18108370, 18108377, 35696423, 35695855, 264634, 264555, 264558, 18108384
1572	81201664 (3143, 3144)			UNCLASSIFIED	35696052, 264905, 264908, 264908, 264910, 264758, 264766, 35695917, 264637
1573	80207066 (3145, 3146)			UNCLASSIFIED	263972

1574	94216142 (3147, 3148)	Novel Protein sim. GBank gll4758334[ref]NP_004256.1pFADS - delta-6 fatty acid desaturase	Contains protein domain (PF00173) - Heme-binding domain in cytochrome b5 and oxidoreductases	Cytochrome	18108394, 264887, 18108397, 18108398, 22278996, 22278997, 22278999, 264259, 29331825, 29331827, 29146498, 29146499, 264107, 264907, 264909, 52644045, 264511, 265008, 264910, 265009, 264591, 21906754, 265011, 265019, 18108351, 264682, 264763, 264764, 18108354, 264389, 264288, 264685, 264766, 264686, 264768, 264688, 21906765, 21908766, 21908767, 21908768, 21908769, 29148629, 264690, 264691, 264693, 20281059, 18108370, 18108374, 18108378, 35695855, 264634, 18108384, 18108385, 22279002, 264563, 264566
1575	95340019 (3149, 3150)	Novel Protein sim. GBank gll3881810[emb]CAA94856] - (Z70763) similar to EF-hand calcium binding protein; cDNA EST EMBL:CO8700 comes from this gene [Caenorhabditis elegans]	Contains protein domain (PF00036) - EF hand	phosphatase	5694075, 264259, 29331822, 29331824, 29331825, 60432289, 29331828, 264909, 265006, 265008, 265009, 265010, 87168559, 55811150, 264448, 18108354, 264389, 264288, 18108357, 55811957, 265020, 265021, 60170615, 264691, 33657023, 33657109, 60431528, 65274791, 35695855, 18108385, 60432113, 22279002, 264482
1576	95314019 (3151, 3152)	Novel Protein sim. GBank gll2773195 (AF039711) - contains similarity to Physcomitrella patens glyceraldehyde 3-phosphate dehydrogenase (GB:X72381) [Caenorhabditis elegans]		UNCLASSIFIED	264569, 264092, 264094, 264095, 264259, 264508, 264905, 264509, 264907, 264909, 264510, 264511, 265008, 264910, 21906754, 265010, 265011, 87168559, 264761, 264762, 264288, 264766, 264769, 264691, 264693, 35695855, 264632, 264634, 264635, 264638, 83373044, 264486
1577	87613800 (3153, 3154)	Novel Protein sim. GBank gll2499130[sp]P70315[WASP_MOUSE - WISKOTT- ALDRICH SYNDROME PROTEIN HOMOLOG (WASP)]		UNCLASSIFIED	264511, 265011, 264681, 264369, 264686, 264689, 264629, 264555, 264558, 264559
1578	87123138 (3155, 3156)				264259, 29331826, 265017, 264689, 264693, 60432113
1579	88085141 (3157, 3158)	Novel Protein sim. GBank gll2978255[gb]BAA25190] - (AB007407) myeloid zinc finger protein-2 [Mus musculus]	Contains protein domain (PF00096) - Zinc finger, C2H2 type	UNCLASSIFIED	35696286, 264908, 264909, 60433438, 55811386, 264369, 264685, 33657023, 264555, 264556, 264557, 87168518
1580	87255702 (3159, 3160)	Novel Protein sim. GBank gll4324682[gb]AAD16986] - (AF109674) late gestation lung protein 1 [Rattus norvegicus]	Contains protein domain (PF00188) - SCP-like extracellular protein	glycoprotein	22278999, 35696052, 29331830, 52644045, 55812038, 87168474, 265018, 264448, 265022, 264638, 56526486, 22279000
1581	95087431 (3161, 3162)	Novel Protein sim. GBank gll2088838 (AF003386) - F59E12.4 gene product [Caenorhabditis elegans]			22278995, 29331822, 29331824, 29331826, 55812038, 87168474, 265018, 264448, 56182435, 264595, 55812038, 87168559, 265017, 264288, 21908764, 55811957, 35695917, 264692, 55811576, 264637, 56182323, 264559, 83373044, 60432113

1582	95358052 (3163, 3164)	Novel Protein sim. GBank gij5420387[embjCAB6679.1] - (AJ243459) proteophosphoglycan [Leishmania major]		phosphatase	264259, 60432289, 29331827, 264509, 264905, 264906, 264907, 264909, 264910, 264762, 264288, 264768, 264769, 264632, 264555, 264639, 56526486, 22279000
1583	87622715 (3165, 3166)	Novel Protein sim. GBank gij5578958[embjCAB51351.1] - (AL050306) dJ47587.2 (novel protein) [Homo sapiens]		UNCLASSIFIED	60170831, 33657402, 264682, 21906766, 35695855, 284563
1584	95337722 (3167, 3168)	Novel Protein sim. GBank gij5531815[gibAAD44482.1] - (AF078850) steroid dehydrogenase homolog [Homo sapiens]	Contains protein domain (PF00108) - short chain dehydrogenase	dehydrogenase	60424179, 52646842, 65274572, 56182575, 22278995, 35696286, 22278996, 22278998, 22278999, 264259, 29331822, 56182181, 60424269, 60432289, 29331827, 29331828, 35696052, 29146498, 68712502, 29331830, 52644045, 56182435, 264510, 264512, 265008, 60433356, 33657402, 60433438, 55812038, 21906754, 55811386, 52644296, 87168474, 87168559, 265018, 265019, 264448, 264369, 264288, 18108358, 21906765, 21906767, 21906768, 21906769, 35695917, 265020, 265021, 265022, 52644150, 33657023, 33657109, 18108374, 55810764, 55811576, 35696423, 65274791, 35695855, 56182323, 83373044, 18108387, 87168518, 60432113, 22279002
1585	87626117 (3169, 3170)	Novel Protein sim. GBank gij4240132[djBAA74846.1] - (AB020630) KIAA0823 protein [Homo sapiens]	Contains protein domain (PF00023) - Ank repeat	phosphatase	35696286, 22278998, 264259, 29331822, 29331824, 29331825, 264905, 265006, 265007, 265008, 60433356, 33109954, 87168474, 265011, 265017, 284604, 264369, 264288, 264685, 264769, 18108359, 21906765, 18108364, 18108370, 264629, 263972, 18108383, 18108388, 264482, 264564
1586	88067081 (3171, 3172)	Novel Protein sim. GBank gij3786494 (AF098993) - No definition line found [Caenorhabditis elegans]			265017, 265018, 264689, 33657023, 263978, 264636, 264563
1587	87617128 (3173, 3174)	Novel Protein sim. GBank gij3253159 (AF005355) - translation initiation factor eIF2C [Drosophila melanogaster]		UNCLASSIFIED	264907, 264908, 264511, 264910, 264591, 264594, 264629, 264631, 264563, 264483, 264567
1588	87802536 (3175, 3176)	Novel Protein sim. GBank gij1077573[pjri]S52680 - probable ribosomal protein L34, mitochondrial - yeast [Saccharomyces cerevisiae]	Contains protein domain (PF00468) - Ribosomal protein L34	UNCLASSIFIED	264259, 29331828, 264905, 265006, 264758, 21906754, 264761, 264762, 21906765, 21906769, 60170615, 52644150, 33657109, 35695855, 56182323, 18108385
1589	90980653 (3177, 3178)	Novel Protein sim. GBank gij2137756[pjri]48748 - semaphorin C - mouse (fragment)		UNCLASSIFIED	65274572, 264490, 29331822, 66714117, 29331827, 29331828, 56182435, 265008, 60170831, 264595, 264758, 264586, 265011, 264686, 21906766, 21906768, 55811957, 27486265, 264639, 18108385, 56526486, 60432113

1590	95319825 (3179, 3180)			UNCLASSIFIED	284499, 22278996, 264258, 29331824, 29331825, 29331826, 29331827, 265006, 60433356, 21906754, 265017, 265018, 265019, 264448, 264765, 264288, 52644229, 21906765, 21906767, 21906768, 21906769, 265021, 264692, 27496285, 35695763, 56526486, 60432113, 22279000, 22279002, 264564
1591	86877160 (3181, 3182)	Novel Protein sim. GBank		MHC	264259, 264905, 29331830, 264595, 265017, 264448, 264288, 264890, 264629, 87168518
1592	87882533 (3183, 3184)	gi 4557749 ref NP_000237.1 pMHC2 - MHC class II transactivator			
1593	94991661 (3185, 3186)			UNCLASSIFIED	65274572, 60432049, 264509, 60433356, 21906754, 21906767, 21906768, 18108370, 35696423, 22279000, 264585, 264567
1594	87773752 (3187, 3188)	Novel Protein sim. GBank gi 3877072 emb CAA87060 (Z46937) similarity with ribosomal protein L21 [Caenorhabditis elegans]		UNCLASSIFIED	264488, 29331827, 264905, 264906, 264907, 264908, 264909, 264910, 264592, 264593, 264757, 264602, 264604, 264760, 264681, 264288, 264766, 264768, 29148629, 35695917, 264692, 264628, 264629, 264630, 264632, 264634, 264635, 264636, 264639, 264563, 264584, 264568
1595	78918425 (3189, 3190)	Novel Protein sim. GBank gi 3152703 (AF065389) - tetraspan NET-4 [Homo sapiens]	Contains protein domain (PF00335) - 4 transmembrane segments integral membrane proteins	UNCLASSIFIED	29331826, 264908, 55811957
1596	78933928 (3191, 3192)	Novel Protein sim. GBank		UNCLASSIFIED	29146498, 264758, 263967
1597	86971857 (3193, 3194)	gi 5257114 gb AAD41244.1 AF09448 - (AF094480) cholesterol 24-hydroxylase [Homo sapiens]	Contains protein domain (PF00067) - Cytochrome P450	cyt450	264092, 29331824, 264508, 264682, 264369, 264686, 264630, 264563
1598	87862939 (3195, 3196)	Novel Protein sim. GBank			264259, 264634
1599	87849829 (3197, 3198)	gi 4506797 ref NP_000324.1 pSCA7 - spinocerebellar ataxia 7 (olivopontocerebellar atrophy with retinal degeneration)	Contains protein domain (PF01581) - FMRFamide related peptide family	UNCLASSIFIED	52645080, 29331824, 29331826, 264511, 265009, 265011, 264605, 264448, 264764, 265020, 264692, 264693, 18108370, 264635, 18108385
1600	80056002 (3199, 3200)				29331826, 264603, 264691, 264563
1601	15023248 (3201, 3202)			UNCLASSIFIED	284635
1602	86926987 (3203, 3204)	Novel Protein sim. GBank	Contains protein domain (PF00018) - SH3 domain	struct	29146499, 264112, 264762, 18108351, 29148627, 263974
1603	80502072 (3205, 3206)	gi 5305704 gb AAD41780.1 AF12853 - (AF128535) cytoplasmic phosphoprotein PACSIN2 [Mus musculus] Novel Protein sim. GBank gi 283920 pir S27939 - lensin - chicken	collagen		264490, 29331824, 264907, 264909, 264511, 265008, 264592, 265010, 265011, 264762, 264764, 264369, 264288, 264687, 264769, 264693, 264628, 264634, 264636, 264555, 264556, 264638, 264557, 264558, 264559, 18108385
1604	80221813 (3207, 3208)	Novel Protein sim. GBank gi 4768831 gb AAD29633.1 AF11682 - (AF116827) unknown [Homo sapiens]	ATPase-associated		263977

1605	91221129 (3209, 3210)			struct	264905, 264509, 264906, 264907, 264908, 264909, 264604, 264766, 264768, 264692, 264693, 33657109, 264629, 35695855, 264635, 264636, 264637
1606	94312703 (3211, 3212)	Novel Protein sim. GBank gi 4505313 ref NP_003794.1 pMYOM - UNKNOWN	Contains protein domain (PF00047) - immunoglobulin domain	struct	22278996, 22278999, 264259, 33657402, 265017, 18108351, 264448, 21908767, 21908769, 52644150, 264691, 87168518, 264689
1607	10871805 (3213, 3214)	Novel Protein sim. GBank gi 5174473 ref NP_005888.1 pPPI - Intracisternal A particle-promoted polypeptide		transcriptfactor	
1608	80428900 (3215, 3216)	Novel Protein sim. GBank gi 2224629 dbj BAA20802 - (AB002342) KIAA0344 [Homo sapiens]		UNCLASSIFIED	264094, 264906, 264907, 264908, 264910, 264591, 264603, 264768, 264693, 264634, 264635, 264637, 264639
1609	94311572 (3217, 3218)	Novel Protein sim. GBank gi 4884073 emb CA943213.1 - (AL049934) hypothetical protein [Homo sapiens]			52844507, 52845156, 52846365, 52846842, 56182575, 22278994, 56994075, 35696286, 22278997, 22278998, 22278999, 264259, 52845080, 29147620, 29331828, 35696052, 33656970, 264508, 264509, 264907, 52844045, 56182435, 264510, 264511, 264512, 33657402, 21906754, 52846317, 33109994, 52844296, 87168474, 265017, 265018, 265019, 18108351, 264448, 264288, 264769, 52844229, 21906765, 21906766, 21906767, 21906768, 21908769, 55811957, 35695917, 265020, 265021, 265022, 52844150, 33657023, 33657109, 52845129, 27486261, 27486262, 35695763, 264628, 18108370, 18108376, 35698423, 264638, 52644332, 18108387, 87168518, 22278000, 264563, 264486
1610	85468200 (3219, 3220)	Novel Protein sim. GBank gi 283920 pir J27839 - lensin - chicken		UNCLASSIFIED	264593, 264757, 55812038, 265018, 265020, 264691, 264692, 264693, 264631, 264634, 264635, 264555, 22279000, 264564
1611	94122843 (3221, 3222)	Novel Protein sim. GBank gi 107284 pir J35415 - peroxidase (EC 1.11.1.7), thyroid (Grave's disease) - human (fragment)	Contains protein domain (PF00008) - EGF-like domain	peroxidase	35696286, 21906765, 264691, 35696423
1612	85748031 (3223, 3224)	Novel Protein sim. GBank gi 3874846 emb CAA94337 - (Z70307) Similarly to B. subtilis tetracycline resistance protein (SW:TCR2_BACSU); cDNA EST EMBL:CO9951 comes from this gene; cDNA EST EMBL:CO8265 comes from this gene [Caenorhabditis elegans]		UNCLASSIFIED	264488, 264509, 18108370, 18108387, 264486
1613	82247354 (3225, 3226)			UNCLASSIFIED	264759

1614	81228634 (3227, 3228)	Novel Protein sim. GBank gi 4680673 gb AAD27728.1 AF132951 (AF132951) CGI-17 protein [Homo sapiens]	Contains protein domain (PF01605) - eRF1-like proteins	UNCLASSIFIED	22278995, 22278998, 22278997, 22278998, 22278999, 264259, 29331822, 264908, 264512, 265009, 265011, 265017, 265018, 265019, 18108351, 264683, 264288, 264766, 21908767, 21908768, 21906769, 35695917, 265021, 265022, 35696423, 35695855, 60170394, 56182323, 83373044, 264556 22278996, 35696286, 22278997, 29331822, 35696052, 29331828, 264508, 264908, 284909, 56182435, 264511, 265017, 265019, 264766, 264767, 264768, 265020, 264691, 264628, 264632, 264635, 264555, 264556, 56182323, 264558, 22279002
1615	86121909 (3229, 3230)	Novel Protein sim. GBank gi 56889485 dbj BAA83026.1 - (AB028997) KIAA1074 protein [Homo sapiens]	Contains protein domain (PF00023) - Ank repeat	homeobox	22278996, 35696286, 22278997, 29331822, 35696052, 29331828, 264508, 264908, 284909, 56182435, 264511, 265017, 265019, 264766, 264767, 264768, 265020, 264691, 264628, 264632, 264635, 264555, 264556, 56182323, 264558, 22279002
1616	94311819 (3231, 3232)	Novel Protein sim. GBank gi 3876260 emb CAB01696 - (Z78418) cDNA EST EMBL:D71020 comes from this gene; cDNA EST EMBL:D73593 comes from this gene; cDNA EST EMBL:C07649 comes from this gene; cDNA EST EMBL:C09081 comes from this gene; cDNA EST yk399f2.3 comes from this gene; cDNA ...	UNCLASSIFIED	UNCLASSIFIED	264488, 52644507, 52645156, 52646365, 52646842, 22278994, 22278995, 35696286, 22278996, 22278997, 22278999, 52645080, 29331822, 29331824, 29331825, 29331827, 29331828, 35696052, 33656970, 264905, 264909, 264594, 52646317, 21906754, 33657084, 52644296, 87168474, 87168559, 265017, 265018, 265019, 264681, 264448, 264684, 52644229, 21906764, 264689, 21908765, 21906766, 21906769, 35695917, 265020, 265021, 52644150, 33657023, 52645129, 33657109, 33657182, 27486261, 27486262, 33657349, 27486265, 35695763, 18108376, 35696423, 35695855, 264557, 52644332, 264558, 18108385, 87168518 35696052, 264905, 264509, 264907, 264908, 264510, 264511, 264764, 264766, 264768, 264689, 264693, 18108374, 264635, 264636, 264638
1617	88090742 (3233, 3234)	Novel Protein sim. GBank gi 466053 sp P34679 YO41_CAEEL - HYPOTHETICAL 68.7 KD PROTEIN ZK757.1 IN CHROMOSOME III	Contains protein domain (PF01529) - DHHC zinc finger domain	peptidase	22278999, 264092, 29331824, 29331825, 35696052, 33657084, 21906765, 27486284
1618	86272860 (3235, 3236)	Novel Protein sim. GBank gi 4240231 dbj BAA74894.1 - (AB020678) KIAA0871 protein [Homo sapiens]	Contains protein domain (PF00010) - Helix-loop-helix DNA-binding domain	struct	22278999, 264259, 29331822, 29331824, 29331825, 29331826, 29331827, 29331828, 35696052, 56182435, 265007, 265008, 264910, 60170831, 60432228, 60433356, 60433438, 265019, 264448, 264288, 264686, 21906768, 265021, 60170615, 33657023, 65274620, 33657109, 18108374, 18108376, 35696423, 35695855, 56182323, 56526486
1619	95354580 (3237, 3238)	Novel Protein sim. GBank gi 5031763 ref NP_005515.1 pHRY - hairy (Drosophila)- homolog	Contains protein domain (PF00010) - Helix-loop-helix DNA-binding domain	transcriptfactor	22278999, 264259, 29331822, 29331824, 29331825, 29331826, 29331827, 29331828, 35696052, 56182435, 265007, 265008, 264910, 60170831, 60432228, 60433356, 60433438, 265019, 264448, 264288, 264686, 21906768, 265021, 60170615, 33657023, 65274620, 33657109, 18108374, 18108376, 35696423, 35695855, 56182323, 56526486
1620	87344655 (3239, 3240)	Novel Protein sim. GBank gi 1351047 sp P45843 SCRT_DROME - SCARLET PROTEIN		UNCLASSIFIED	264684

1621	87076708 (3241, 3242)	Novel Protein sim. GBank gi 3822553 (AF088788) - nuclear calmodulin-binding protein [Gallus gallus]	Contains protein domain (PF00622) - SPRY domain	UNCLASSIFIED	264910 18108392, 65274572, 18108398, 22278996, 22278997, 22278999, 29148498, 29148499, 264905, 264908, 264909, 264828, 52644045, 264592, 60433356, 21906754, 264602, 265017, 264369, 21906768, 55811957, 265021, 60170815, 284635, 284557, 60170394, 83373044, 18108385, 22279000, 22279002, 284566
1623	87779106 (3245, 3246)	Novel Protein sim. GBank gi 731086 sp P40389 UV22_SCHPO - UV-INDUCED PROTEIN UV22		ribosomalprot	18108398, 264259, 264909, 56182435, 87168474, 264448, 21908768, 35695917, 264691, 87168518, 264563
1624	87338178 (3247, 3248)	Novel Protein sim. GBank gi 3875666 emb CAB05478 - (Z83104) cDNA EST EMBL: T00015 comes from this gene; cDNA EST EMBL: D33665 comes from this gene; cDNA EST EMBL: D36540 comes from this gene; cDNA EST yk240f8.3 comes from this gene; cDNA EST yk387c8.3 comes from this gene; cDNA ES...		UNCLASSIFIED	66714117, 29331825, 264909, 265008, 264758
1625	95354748 (3249, 3250)	Novel Protein sim. GBank gi 458622 db BAA76833.1 - (AB023208) KIAA0989 protein [Homo sapiens]		Kinase	264489, 22278994, 22278995, 22278996, 35690286, 22278997, 22278998, 22278999, 264092, 264259, 29331824, 29331825, 29331827, 29331828, 264102, 264106, 284508, 33657084, 265017, 265018, 18108351, 264683, 264369, 264288, 21908765, 21906766, 21906767, 21906769, 35695917, 265021, 264691, 65274620, 18108368, 263972, 18108376, 35696423, 264631, 264634, 22279000, 22279002
1628	94734369 (3251, 3252)	Novel Protein sim. GBank gi 5879070 gb AAD46844.1 AF16090 - (AF160904) BcDNA HL05936 [Drosophila melanogaster]			52644507, 52845156, 52846365, 52846842, 22278994, 56994075, 22278997, 22278998, 22278999, 60432049, 264259, 29331822, 29331824, 66714117, 29331826, 60432289, 29331827, 29331828, 35696052, 264906, 66712502, 264909, 265008, 265009, 60432229, 60433356, 60433438, 21906754, 52846317, 52844296, 265011, 87168559, 264604, 265018, 264448, 264369, 264288, 264786, 52844229, 264689, 21906765, 21908768, 35695917, 265021, 265022, 52644150, 33657023, 65274620, 27486261, 27486262, 27486265, 35695763, 263972, 52644332, 60170394, 87168518, 60432113, 264567
1627	83368773 (3253, 3254)	Novel Protein sim. GBank gi 3668087 (AC004667) - hypothetical protein [Arabidopsis thaliana]		UNCLASSIFIED	264288
1628	85708459 (3255, 3256)			eph	264288, 264686, 264767, 22279002

1629	84993841 (3257, 3258)	Novel Protein sim. GBank gi 4240175 dbj BAA74866.1 - (AB020850) KIAA0843 protein [Homo sapiens]		struct	264555
1630	87779027 (3259, 3260)			UNCLASSIFIED	29331822, 29331827, 265010, 264693, 264634, 22279002
1631	87758454 (3261, 3262)	Novel Protein sim. GBank gi 1915892 emb CAA69955 - (Y08740) tom-1A protein [Gallus gallus]		UNCLASSIFIED	55811957, 264259, 33657023, 264693, 29331822, 29331824, 29331827, 29331828, 264906, 264908, 55811578, 264910, 264634, 264636, 264637, 56182323, 264559, 264758, 18108385, 264563, 264764, 264766
1632	87871692 (3263, 3264)	Novel Protein sim. GBank gi 2558501 dbj BAA22896 - (D83850) hepatoma-derived growth factor [Mus musculus]		UNCLASSIFIED	264687, 264769, 264691, 264692, 29148489, 264509, 264905, 264907, 264511, 284512, 264482, 264681, 264763, 264682, 264683, 264488, 264259, 264907, 264908, 264909, 264628, 264629, 264831
1633	87773683 (3265, 3266)				265007, 264637, 22278002
1634	85992817 (3267, 3268)	Novel Protein sim. GBank gi 4887229 gb AAD32244.1 AF15075 - (AF150755) microtubule-actin crosslinking factor [Mus musculus]	Contains protein domain (PF00435) - Spectrin repeat	struct	
1635	84232600 (3269, 3270)			UNCLASSIFIED	65274572, 22278998, 35696052, 52844045, 264511, 265008, 265009, 265010, 265011, 265018, 265019, 264448, 264389, 21906765, 21906788, 265021, 264690, 264482
1636	80413227 (3271, 3272)	Novel Protein sim. GBank gi 455751 ref NP_001339.1 pDAPK - death-associated protein kinase 3	Contains protein domain (PF00069) - Eukaryotic protein kinase domain	UNCLASSIFIED - kinase	264558
1637	80070435 (3273, 3274)	Novel Protein sim. GBank gi 3420051 AC004680 - unknown protein [Arabidopsis thaliana]			21906765, 21906767, 22278996, 35696286, 22278999, 264259, 264692, 264693, 29331824, 33657109, 264508, 264906, 18108370, 264629, 265007, 33657402, 21906754, 264602, 264604, 264764, 264683, 264566, 264288
1638	87101854 (3275, 3276)				264488, 18108394, 65274572, 56182575, 35696286, 29331824, 29331826, 29331827, 35696052, 264908, 56182435, 264112, 265008, 265009, 264757, 264758, 55811386, 264603, 264760, 18108351, 264764, 264288, 264766, 264768, 21906767, 55811957, 264691, 33657023, 65274620, 18108370, 55810764, 55811576, 264558, 264639, 83373044, 18108385, 87188518
1639	84322184 (3277, 3278)	Novel Protein sim. GBank gi 5420389 emb CAB46680.1 - (AJ243460) proteophosphoglycan [Leishmania major]		UNCLASSIFIED	

1640	94143185 (3278, 3280)	Novel Protein sim. GBank gj 2842469 emb CAA16847.1 - (AL021747) hypothetical protein [Schizosaccharomyces pombe]		UNCLASSIFIED	56182575, 56994075, 35696286, 60432049, 60432289, 29331827, 35696052, 52644045, 56182435, 264510, 265006, 265007, 265008, 264910, 265009, 33657402, 55812038, 265010, 265011, 265017, 265018, 264288, 52644229, 21908765, 21908768, 21908769, 35695917, 265021, 60170815, 52644150, 33657023, 33657108, 33657349, 18108374, 35696423, 65274791, 35695855, 264632, 264555, 56182323, 22279000
1641	87625160 (3281, 3282)			UNCLASSIFIED	29146499, 265006, 265007, 265008, 265009, 55812038, 265010, 265011, 264555, 264556, 264558, 18108383
1642	94312557 (3283, 3284)	Novel Protein sim. GBank gj 1575333 (U60416) - myr 6 myosin heavy chain [Rattus norvegicus]	Contains protein domain (PF01843) - struct DIL domain		22278999, 29147620, 29331826, 29331828, 33656970, 55812038, 265010, 265018, 265019, 18108351, 264689, 265020, 265022, 264690, 33657023, 65274620, 35695763, 52644332, 18108381, 60170394, 56182323, 18108388, 87168518, 22279002, 264564, 29331825, 29331827, 29331828, 21908754, 265019, 264288, 264693, 33657349, 18108370, 18108376, 264555, 83373044, 22279002, 264482
1643	94131766 (3285, 3286)				264905, 264907, 264908, 264910, 265009, 264757, 264758, 264761, 264762, 264763, 264766, 264768, 264769, 264628, 264629, 264630, 264631, 264632, 264563, 264564, 264565, 264566, 264567
1644	88095125 (3287, 3288)			UNCLASSIFIED	264685, 264693
1645	95013858 (3289, 3290)	Novel Protein sim. GBank gj 1076802 pir S49915 - extensin like protein - maize		UNCLASSIFIED	22278994, 56994075, 35696286, 264259, 29331824, 29331825, 29331826, 60432289, 264508, 60433356, 60433438, 87168559, 265018, 264687, 35695917, 264692, 33657023, 33657182, 27486261, 27486265, 33657349, 60432113, 264563, 264564
1646	95362691 (3291, 3292)			UNCLASSIFIED	29331822, 264906, 264908, 264369, 21908768, 60170815, 264639, 22279000
1647	94278428 (3293, 3294)	Novel Protein sim. GBank gj 5002573 emb CAB44338.1 - (Y17466) alpha-N-acetylgalactosamine alpha-2,6- sialyltransferase [Fugu rubripes]		UNCLASSIFIED	265009, 264686, 55811957, 35695917, 55810764, 264556, 56182323, 264558, 18108385
1648	87642098 (3295, 3296)		Contains protein domain (PF00096) - Zinc finger, C2H2 type	UNCLASSIFIED	

1649	95347628 (3297, 3298)	Novel Protein sim. GBank gll854065[emb]CAA58337] - (X83413) U88 [Human herpesvirus 6]		cadherin	264488, 22278995, 35696286, 22278996, 22278997, 22278999, 60432049, 264259, 29331822, 29331824, 29331825, 29331826, 29331827, 29331828, 264905, 264907, 66712502, 264908, 52644045, 264909, 56182435, 264511, 265007, 265008, 265009, 264591, 264593, 60433438, 264596, 55812038, 21906754, 285011, 284601, 284602, 265017, 265018, 265019, 264682, 264448, 264764, 264683, 264288, 264766, 264685, 264687, 264768, 264688, 264769, 52644229, 264689, 21906765, 21906766, 21906767, 21906768, 55811957, 35695917, 265021, 265022, 52644150, 264692, 33657023, 33657109, 20281149, 18108370, 284628, 18108374, 18108376, 35696423, 35696855, 264632, 264634, 264635, 264636, 18108380, 264639, 264558, 18108382, 18108384, 18108385, 18108387, 264080, 264404, 60432113, 22279000, 22279002, 264482, 264565, 264566, 264487
1650	87416539 (3299, 3300)	Novel Protein sim. GBank gll3647335[emb]CAA21059] - (AL031644) possible zinc-finger protein [Schizosaccharomyces pombe]			265011, 264602, 21906767, 18108374, 18108377, 18108385
1651	91639773 (3301, 3302)	Novel Protein sim. GBank gll4884278[emb]CAB43247.1] - (AL050037) hypothetical protein [Homo sapiens]		synthase	264488, 52645156, 18108397, 35696286, 22278996, 22278999, 264259, 29331822, 29331824, 29331825, 29331826, 29331827, 29331828, 264508, 264908, 29331830, 264910, 60432229, 21906754, 265010, 265011, 265017, 265019, 264448, 18108354, 264288, 264688, 21906765, 21906766, 21906768, 21906769, 265022, 264692, 264693, 264629, 35695855, 264556, 264637, 264557, 264559, 83373044, 56526486, 22279000, 22279002, 264564
1652	86598622 (3303, 3304)	Novel Protein sim. GBank gll1657837 (U73200) - p116Rip [Mus musculus]	Contains protein domain (PF00169) - PH domain	struct	22278997, 29146498, 58182435, 21906754, 264398, 21906765, 21906768, 21906769, 265020, 52644150, 33657109, 22279000, 22279002
1653	94255993 (3305, 3306)	Novel Protein sim. GBank gll3776054[emb]CAA06273] - (AJ004999) Tapasin [Gallus gallus]	Contains protein domain (PF00047) - Immunoglobulin domain	glycoprotein	18108398, 22278995, 22278996, 264259, 29331822, 29331824, 60432289, 29331826, 29331827, 29331830, 264909, 265006, 265009, 60432229, 60433356, 60433438, 21906754, 265017, 265019, 264448, 264683, 264288, 265021, 265022, 264692, 18108364, 65274781, 18108384, 60432113, 264567
1654	78756471 (3307, 3308)			UNCLASSIFIED	33657109, 264565

1655	86689348 (3309, 3310)	Novel Protein sim. GBank gi 3355717 emb CAA73496 - (Y13053) seryl-tRNA synthetase [Zea mays]		synthase	52644507, 35696286, 22278998, 22278999, 29331824, 29331825, 29331828, 33656970, 284908, 52644045, 264511, 264910, 52646317, 264288, 52644229, 33657023, 33657109, 52644332, 264557, 56182323, 56526486, 60432113
1656	79862287 (3311, 3312)	Novel Protein sim. GBank gi 1800141 dbj BAA18947 - (D83206) P24 protein [Mus musculus]		UNCLASSIFIED	29331822, 29331824, 29331825, 264563
1657	87771994 (3313, 3314)	Novel Protein sim. GBank gi 4557645 ref NP_001524.1 p HNRP - heterogeneous nuclear ribonucleoprotein L	Contains protein domain (PF00076) - RNA recognition motif (a.k.a. RRM, RBD, or RNP domain)	- dna_rna_bind	29331827, 265009, 21906766, 21906767, 265020, 265022, 33657108, 284638, 56526486, 264482
1658	87773778 (3315, 3316)	Novel Protein sim. GBank gi 3877072 emb CAA87060 - (Z46937) similarity with ribosomal protein L21 [Caenorhabditis elegans]	Contains protein domain (PF00829) - Ribosomal prokaryotic L21 protein	UNCLASSIFIED	52646365, 35696286, 22278996, 22278997, 22278998, 22278999, 264259, 29331822, 29331824, 29331825, 29331826, 29331827, 29331828, 29146498, 264905, 264908, 52644045, 265006, 60433356, 264757, 60433438, 21906754, 265011, 18108351, 264448, 264369, 264288, 264766, 264768, 21906765, 21906767, 21906768, 21906769, 29148629, 265021, 265022, 18108362, 263969, 263971, 18108374, 35696423, 18108383, 22279000, 264482
1659	88230101 (3317, 3318)	Novel Protein sim. GBank gi 539218 pir S38038 - hypothetical protein YKL201c - yeast (Saccharomyces cerevisiae)		UNCLASSIFIED	52646317, 21906766, 21906767, 21906768, 87168518, 22278996, 265020, 22278999, 87168559, 264603, 265017, 264631, 265018, 265019, 22279002, 264482, 264635, 264565
1660	94315313 (3319, 3320)	Novel Protein sim. GBank gi 2497012 sp Q1001Q YSV4_CAEEL - HYPOTHETICAL 26.6 KD PROTEIN T19C3.4 IN CHROMOSOME III		UNCLASSIFIED	264488, 35696286, 264259, 35696052, 264508, 264509, 264905, 264906, 264907, 264908, 264909, 264510, 264511, 265006, 265007, 264512, 265009, 264910, 264592, 264596, 265010, 264600, 264602, 265017, 265018, 264603, 264760, 264764, 264288, 264766, 264686, 264768, 264769, 264689, 21906766, 35695917, 264690, 33657023, 264693, 33657109, 264629, 35696423, 35695855, 264634, 264635, 264555, 264636, 264637, 264556, 264638, 264639, 264559, 18108385, 18108388, 264563, 264483, 264564, 264565, 264566, 264486, 264567

1661	94234071 (3321, 3322)	Novel Protein sim. GBank gi 4759100 ref NP_004759.1 pSFRS - splicing factor, arginine/serine-rich 11	Contains protein domain (PF00076) - RNA recognition motif (a.k.a. RRM, RBD, or RNP domain)	UNCLASSIFIED	264488, 22278998, 264259, 29331824, 29331826, 29331827, 29331828, 264509, 68712502, 29331830, 264908, 52844045, 265007, 264512, 60433356, 60433438, 55812038, 21906754, 265019, 284448, 264766, 264768, 264769, 21906768, 21906769, 265020, 33657023, 33657109, 65274791, 87168518, 264482, 264563, 264564, 264565, 264567
1662	94135172 (3323, 3324)	Novel Protein sim. GBank gi 1730502 sp P52875 PF27_MOUSE - TRANSMEMBRANE PROTEIN PFT27			18108392, 29331822, 29331828, 20281100, 264106, 265008, 265007, 265008, 18108348, 2190766, 18108365, 18108366, 18108374, 83373044, 18108385
1663	94217146 (3325, 3326)	Novel Protein sim. GBank gi 4884136 emb CAB43275.1 - (AL050107) hypothetical protein [Homo sapiens]	Contains protein domain (PF00387) - WW domain	kinase	52645156, 56182575, 22278994, 22278995, 35696286, 22278996, 56994075, 22278997, 22278998, 22278999, 264259, 29331822, 29331826, 29331827, 29331828, 33656970, 29331830, 264908, 56182435, 264511, 60433356, 33657402, 33109954, 87168474, 87188559, 265017, 265018, 264605, 18108351, 264764, 264288, 264766, 264768, 21906765, 21906766, 21906767, 21906768, 21906769, 265021, 265022, 264691, 33657023, 264693, 263967, 33657109, 264630, 52644332, 83373044, 87168518, 80432113, 22279000
1664	94234076 (3327, 3328)	Novel Protein sim. GBank gi 3043692 db BAA25510 - (AB011156) KIAA0584 protein [Homo sapiens]		UNCLASSIFIED	264488, 263994, 35696286, 29331824, 35696052, 264508, 264509, 264905, 264906, 264907, 264908, 264909, 264510, 264511, 265009, 264910, 60170831, 264591, 264592, 264595, 87168474, 265011, 264600, 264601, 264604, 264605, 264760, 264762, 18108351, 264681, 264682, 264763, 264683, 264764, 264288, 264684, 264766, 264687, 264768, 264769, 21906764, 21906765, 21906767, 35695917, 265021, 264534, 60170615, 264690, 264691, 264692, 33657109, 33657182, 264628, 18108370, 264629, 35696423, 35695855, 264634, 264635, 264555, 264638, 264637, 264638, 264639, 264558, 83373044, 87168518, 264563, 264566, 264486

1665	91226952 (3329, 3330)	Novel Protein sim. GBank gij1083506[ipir][S50085 - slaloadhesin - mouse]	Contains protein domain (PF00047) - Immunoglobulin domain	immunoglob	264488, 29331826, 29331828, 264509, 264906, 264907, 264909, 264510, 264511, 264910, 264592, 264593, 264595, 264758, 264596, 264600, 264760, 264762, 264764, 264766, 264768, 264629, 264630, 264634, 264636, 83373044, 264564, 264566, 264567, 264488
1668	95358160 (3331, 3332)	Novel Protein sim. GBank gij3913431[sp]O42843[DDX8_SCHPO - PUTATIVE PRE- MRNA SPLICING FACTOR ATP-DEPENDENT RNA HELICASE SPAC10F6.02C]	Contains protein domain (PF00375) - S1 RNA binding domain	helicase	56994075, 22278999, 264259, 29331824, 29331826, 29331827, 29146498, 265009, 33109954, 87168559, 265019, 264288, 264688, 21906767, 21906769, 264691, 33657182, 18108370, 18108374, 18108385, 22279002
1667	91228655 (3333, 3334)	Novel Protein sim. GBank gij5689535[idb][BAA83051.1] - (AB029022) KIAA1099 protein [Homo sapiens]	Contains protein domain (PF01412) - Putative GTP-ase activating protein for Arf	transport	264259, 29331822, 29331826, 264905, 264906, 264908, 264510, 265009, 264595, 264758, 265011, 87168559, 265017, 265018, 265019, 264448, 264766, 264686, 21906765, 21906767, 21906769, 265020, 265021, 60170615, 264690, 264692, 264693, 18108368, 18108370, 263972, 55810764, 264555, 83373044, 60432113, 22279000, 22279002
1668	88095135 (3335, 3336)	Novel Protein sim. GBank gij2076894[gb][AAB53983.1] - (AF002197) short region of weak similarity to protein kinase C; contains similarity to Pfam domain PF00130 (DAG_PE- bind). Score=10.0, E-value=0.0034, N=1 [Caenorhabditis elegans]		kinase	56714117, 264508, 264509, 264906, 264907, 264908, 264511, 264910, 264784, 264687, 264689, 33657109, 35696423, 35695855, 264632
1669	91227846 (3337, 3338)	Novel Protein sim. GBank gij3975371[emb][CAA85414.1] - (Z36948) contains a valine and arginine rich domain, possesses weak similarity with the RNA binding domains from RNA splicing factor UZAF 65 KD subunit: cDNA EST EMBL:D64658 comes from this gene; cDNA EST EMBL:D68829 comes fr...		UNCLASSIFIED	29331825, 33109954, 264369, 264767, 264689, 33657109, 83373044
1670	87628009 (3339, 3340)			UNCLASSIFIED	264259, 29331824, 29331827, 60433438, 265022, 264636
1671	87346372 (3341, 3342)	Novel Protein sim. GBank gij462451[sp]P34244[KKK1_YEAST - PROBABLE SERINE/THREONINE-PROTEIN KINASE YKL101W]	Contains protein domain (PF00069) - Eukaryotic protein kinase domain	kinase	35696286, 22278997, 29331825, 264909, 21906754, 265017, 265018, 265019, 264682, 264683, 264768, 264688, 21906768, 21906767, 21906768, 21906769, 264691, 264555, 264556, 22279000, 264566
1672	86291834 (3343, 3344)	Novel Protein sim. GBank gij1614270 (U74566) - double- stranded RNA specific adenosine deaminase [Rattus norvegicus]		deaminase	264908, 264909, 264632, 18108381

1673	88095137 (3345, 3346)	Novel Protein sim. GBank gll2076894[gb]AAB53983.1] - (AF002197) short region of weak similarity to protein kinase C; contains similarity to Pfam domain PF00130 (DAG, PE-bind), Score=10.0, E-value=0.0034, N=1 [Caenorhabditis elegans]	Contains protein domain (PF00130) - Phorbol esters/diacylglycerol binding domain (C1 domain)	kinase	264488, 264569, 18108394, 56994075, 22278996, 264259, 35696052, 264508, 264905, 264509, 264906, 264907, 264908, 264909, 264510, 264910, 60170831, 264592, 264594, 264595, 264758, 264601, 264760, 264762, 264683, 264764, 264288, 264766, 264686, 264768, 264687, 264769, 264689, 264690, 33857023, 264692, 264693, 33657108, 264628, 264629, 18108374, 35698423, 35695855, 264631, 264632, 264634, 264635, 264637, 264556, 264638, 264639, 264563, 264482, 264564, 264565, 264566, 264567, 264486
1674	88258028 (3347, 3348)	Novel Protein sim. GBank gll5262467[emb]CABA5693.1] - (AL080062) hypothetical protein [Homo sapiens]		kinase	29331822, 29331824, 264906, 52644045, 60433396, 87168559, 264448, 264288, 264686, 264691
1675	87606466 (3349, 3350)	Novel Protein sim. GBank gll3128366 (AF010496) - 50S ribosomal protein l9 [Rhodospirillum rubrum]		UNCLASSIFIED	56181686, 35696288, 22278997, 22278998, 264259, 29331824, 29331827, 35696052, 66712502, 264764, 264288, 264686, 264687, 35695917, 265020, 264690, 264693, 35695763, 18108370, 35696423, 35695855, 264637, 264639, 18108385, 264584
1676	89358086 (3351, 3352)	Novel Protein sim. GBank gll4164065[gb]AAD053271 - (AF111091) lalophilin 3 splice variant bba1 [Bos taurus]		UNCLASSIFIED	264259, 29331827, 29331828, 264106, 264907, 265009, 264600, 265019, 264288, 21906765, 265020, 265022, 35695855, 83373044, 18108385
1677	87408587 (3353, 3354)	Novel Protein sim. GBank gll3327046[db]BAA31591] - (AB014516) KIAA0616 protein [Homo sapiens]		UNCLASSIFIED	264908
1678	86866829 (3355, 3356)	Novel Protein sim. GBank gll550452 (U08469) - 3-methylcrotonyl-CoA carboxylase, biotin-carrier domain [Glycine max]	Contains protein domain (PF00289) - Carboxyl-phosphate synthase (CPSase)	UNCLASSIFIED	29331824, 264102
1679	87214106 (3357, 3358)	Novel Protein sim. GBank gll550452 (U08469) - 3-methylcrotonyl-CoA carboxylase, biotin-carrier domain [Glycine max]		carboxylase	264488, 18108392, 18108394, 52646842, 18108397, 18108398, 35696288, 29331824, 265006, 265007, 265008, 265009, 18108348, 265011, 18108351, 264683, 18108354, 18108358, 18108359, 21906765, 29148627, 29148629, 264690, 18108361, 18108362, 18108364, 18108365, 18108368, 264628, 18108379, 35696423, 35695855, 264635, 18108381, 18108382, 18108383, 18108384, 18108385, 18108388
1680	81005372 (3359, 3360)	Novel Protein sim. GBank gll2394478 (AF024500) - No definition line found [Caenorhabditis elegans]		transport	65274572, 22278994, 22278999, 66714117, 29331827, 56182435, 21906754, 265018, 264288, 21906769
1681	94324150 (3361, 3362)	Novel Protein sim. GBank gll5689537[db]BAA83052.1] - (AB029023) KIAA1100 protein [Homo sapiens]		UNCLASSIFIED	22278996, 29331822, 264908, 264593, 264604, 265019, 264683, 55811957, 264690, 33657023, 35696423, 83373044, 264563
1682	86042710 (3363, 3364)			UNCLASSIFIED	264909, 265017, 264605

1683	94316213 (3365, 3368)	Novel Protein sim. GBank gi 5031717 ref NP_005704.1 pGPBP - goodpasture antigen- binding protein	Contains protein domain (PF01852) - START domain	UNCLASSIFIED	263994, 35696286, 35696032, 264508, 264509, 264905, 264908, 264907, 264908, 264909, 264511, 265006, 265007, 265009, 264910, 264593, 264758, 265010, 265011, 264760, 264761, 264762, 264763, 264764, 264369, 264766, 264768, 35695917, 264892, 33657109, 35696423, 35695855, 264634, 264635, 264636, 264638, 264639, 63373044, 264488
1684	80063409 (3367, 3368)			UNCLASSIFIED	264553, 264566
1685	94323182 (3369, 3370)	Novel Protein sim. GBank gi 1255371 (U53147) - coded for by C. elegans cDNA yk34a9.5; coded for by C. elegans cDNA yk34a9.3; Similar to guanylate kinase. [Caenorhabditis elegans]	Contains protein domain (PF00625) - kinase Guanylate kinase	UNCLASSIFIED	60424179, 52846842, 22278994, 35696288, 22278998, 264259, 52645080, 29331824, 29331826, 265007, 33657084, 265018, 264681, 264448, 264683, 264369, 264689, 21908765, 21908767, 21908768, 21908769, 265021, 264692, 65274620, 33657109, 27488262, 264635, 52644332, 56182323, 22279000
1686	87820710 (3371, 3372)	Novel Protein sim. GBank gi 2244707 dbj BAA21115.1 - (AB005287) thrombospondin 1 [Bos taurus]		UNCLASSIFIED	56182575, 264259, 264508, 264905, 264509, 264907, 264908, 264510, 264511, 265006, 264512, 265008, 264910, 264758, 265010, 265011, 264805, 18108351, 264764, 264768, 18108357, 264768, 18108362, 264628, 264630, 264631, 264634, 264635, 264637, 264638, 264639, 264565, 264488, 264587
1687	94718400 (3373, 3374)	Novel Protein sim. GBank gi 4680679 gb AAD27729.1 AF13295 - (AF132954) CGI-20 protein [Homo sapiens]		UNCLASSIFIED	35695917, 264906, 264907, 264908, 264510, 265006, 265007, 264910, 264556, 18108381, 18108383, 265011
1688	82158442 (3375, 3376)			UNCLASSIFIED	264905, 264910, 264760, 264629, 264555
1689	94325049 (3377, 3378)	Novel Protein sim. GBank gi 4240193 dbj BAA74875.1 - (AB020659) KIAA0852 protein [Homo sapiens]		UNCLASSIFIED	264569, 35696286, 22278999, 264508, 264908, 264909, 56182435, 33657402, 60433438, 55812038, 265017, 265018, 264448, 264784, 264288, 264686, 29148629, 35695917, 265020, 265021, 263972, 18108374, 65274791, 83373044, 264089
1690	83255346 (3379, 3380)	Novel Protein sim. GBank gi 3800736 (AF031572) - seven- pass transmembrane receptor precursor [Mus musculus]	Contains protein domain (PF00028) - Cadherin domain	cadherin	264369, 21906766, 264692, 264639, 87168518
1691	88095223 (3381, 3382)	Novel Protein sim. GBank gi 2773208 (AF039713) - No definition line found [Caenorhabditis elegans]			264768, 33657109, 29331827, 29148629, 264510, 264106, 264910, 264109, 264508, 60170831, 264563, 264905, 264584, 264891, 264637, 264628, 264907, 264908, 33657023, 264587, 264766, 263974
1692	88106709 (3383, 3384)				264106
1693	87012775 (3385, 3386)	Novel Protein sim. GBank gi 121271 sp P02207 GLB_LAMFL - GLOBIN	Contains protein domain (PF00042) - Globin	UNCLASSIFIED	29331826, 264508, 264905, 264907, 264595, 265010, 265011, 21906768, 33657023, 264629, 263978, 264558

1694	94208168 (3387, 3388)	Novel Protein sim. GBank gi 5453392 ref NP_006225.1 pPOLR - polymerase (RNA) II (DNA directed) polypeptide J (13.3kD)	Contains protein domain (PF01193) - RNA polymerases L / 13 to 16 kDa subunit	mapolymerase	35696286, 22278998, 22278998, 22278999, 264259, 29331822, 29331825, 29331826, 29331828, 35696052, 26146499, 264905, 264908, 2644045, 264511, 285006, 265007, 265009, 264592, 60433358, 21908754, 265010, 265011, 18108351, 264763, 264682, 264448, 264683, 264288, 264768, 264689, 21906768, 60170615, 264691, 284692, 264693, 18108370, 18108374, 263978, 35698423, 35698585, 264556, 18108381, 18108385, 87168518, 264482, 264486 264634
1695	94719325 (3388, 3390)	Novel Protein sim. GBank gi 4680679 gb AAD27729.1 AF13295 - (AF132954) CGI-20 protein [Homo sapiens]		UNCLASSIFIED	
1696	87824038 (3391, 3392)	Novel Protein sim. GBank gi 4220517 emb CAA22990 - (AL035356) hypothetical protein [Arabidopsis thaliana]			22278997, 264259, 265010, 18108351, 264764, 21908766, 18108370
1697	85740963 (3393, 3394)	Novel Protein sim. GBank gi 505652 (U10362) - GP36b glycoprotein [Homo sapiens]		glycoprotein	264682
1698	87445285 (3395, 3396)	Novel Protein sim. GBank gi 5052031 gb AAD38411.1 AF15573 - (AF155739) axotrophin [Mus musculus]			56994075, 22278998, 22278999, 264509, 33637402, 264758, 87168474, 87168559, 265017, 265018, 264448, 264687, 29146627, 21908769, 29146629, 285020, 265022, 33637023, 264558, 87168518, 22279002
1699	87424793 (3397, 3398)	Novel Protein sim. GBank gi 543344 pir J541647 - zinc finger 5 protein - mouse	Contains protein domain (PF00096) - Zinc finger, C2H2 type	UNCLASSIFIED	35696286, 264535
1700	87859161 (3399, 3400)	Novel Protein sim. GBank gi 543344 pir J541647 - zinc finger 5 protein - mouse		UNCLASSIFIED	29331824, 52644045, 265008, 265009, 263969, 263971
1701	86570488 (3401, 3402)	Novel Protein sim. GBank gi 3877439 emb CAA96652 - (Z72510) similarity to yeast UTR3 protein (Swiss Prot accession number P21374); cDNA EST EMBL:D72822 comes from this gene; cDNA EST EMBL:D75763 comes from this gene; cDNA EST yk274e3.3 comes from this gene; cDNA EST yk274e3.5 c...		UNCLASSIFIED	264092, 264110, 263977
1702	87795092 (3403, 3404)	Novel Protein sim. GBank gi 3877439 emb CAA96652 - (Z72510) similarity to yeast UTR3 protein (Swiss Prot accession number P21374); cDNA EST EMBL:D72822 comes from this gene; cDNA EST EMBL:D75763 comes from this gene; cDNA EST yk274e3.3 comes from this gene; cDNA EST yk274e3.5 c...		MHC	22278995, 22278997, 264092, 29146498, 29146499, 264107, 264508, 264907, 264110, 264112, 265009, 60170831, 21906754, 265011, 265017, 264762, 18108351, 264288, 21906765, 35695917, 265021, 60170615, 263967, 33657109, 18108370, 263972, 263974, 18108374, 263976, 35695855, 264555, 263981, 60170394, 18108385, 56528486, 87168518, 60432113
1703	79586651 (3405, 3406)	Novel Protein sim. GBank gi 451544 (U04267) - proline-rich cell wall protein [Gossypium barbadense]		UNCLASSIFIED	264909, 265017, 264628, 264629, 264638
1704	86622978 (3407, 3408)	Novel Protein sim. GBank gi 1263289 (U47856) - fibroin-4 [Araneus diadematus]		UNCLASSIFIED	264369
1705	87795175 (3409, 3410)	Novel Protein sim. GBank gi 4519621 dbj BA75670.1 - (AB017614) OASIS protein [Mus musculus]			264569, 35696286, 264907, 265010, 264687, 264768, 264692, 264693, 264536, 264566, 22278996, 22278998, 264259, 264509, 265018, 264764, 264685, 264688, 21906768, 21908769, 265022, 264691, 264558, 22279000
1706	87790967 (3411, 3412)	Novel Protein sim. GBank gi 3123034 sp Q15011 Y025_HUMAN - HYPOTHETICAL PROTEIN KIAA0025			

1707	88041230 (3413, 3414)	Novel Protein sim. GBank gij4321664[gb AAD15797] - (AF055470) ZNF258 [Homo sapiens]		UNCLASSIFIED	18108396, 22278997, 264259, 29147620, 29331826, 29146498, 284905, 264906, 285008, 284593, 284595, 264758, 284598, 265018, 284760, 18108351, 284764, 264766, 264689, 284693, 18108370, 35698423, 55811576, 264558, 87168518, 60432113, 264567
1708	91220519 (3415, 3416)	Novel Protein sim. GBank gij5174591[ref NP_005947.1 pMTHF - 5,10-methylenetetrahydrofolate dehydrogenase, 5,10-methylenetetrahydrofolate cyclohydrolase, 10-formyltetrahydrofolate synthetase	Contains protein domain (PF01268) - Formate-tetrahydrofolate ligase	synthase	56182575, 22278996, 56994075, 264259, 29331822, 29331824, 29331826, 29331827, 29331828, 29146498, 29146499, 29331830, 265009, 60170831, 33657402, 33109954, 87168559, 265019, 18108351, 284448, 21906765, 21906767, 21906768, 29148627, 29148629, 29148784, 60170615, 52644150, 33657023, 33657109, 18108374, 55811576, 264559, 18108385, 22279000, 264563
1709	80222583 (3417, 3418)			UNCLASSIFIED	264107, 55811957, 263974, 263976, 263977, 263981
1710	20754572 (3419, 3420)	Novel Protein sim. GBank gij5031735[ref NP_005760.1 pHEC - N-acetylglucosamine 6-O-sulfotransferase		UNCLASSIFIED	264556
1711	81013729 (3421, 3422)	Novel Protein sim. GBank gij5454168[ref NP_006453.1 pXAP4 - HBV associated factor	Contains protein domain (PF00641) - Zn-finger in Ran binding protein and others.	sulfotransferase	65274572, 29331824, 29331826, 264768, 60431528, 35698423, 60432113, 264563
1712	95330184 (3423, 3424)	Novel Protein sim. GBank gij5454168[ref NP_006453.1 pXAP4 - HBV associated factor	Contains protein domain (PF00641) - Zn-finger in Ran binding protein and others.	kinase	56994075, 264093, 264259, 29331822, 264099, 29331824, 29331827, 264107, 264110, 264511, 264592, 265011, 265018, 264683, 264686, 264689, 265020, 33657023, 263967, 33657109, 263974, 35698423
1713	94143453 (3425, 3426)	Novel Protein sim. GBank gij160409 (M69183) - mature-parasite-infected erythrocyte surface antigen [Plasmodium falciparum]	Contains protein domain (PF00643) - B-box zinc finger.	UNCLASSIFIED	35695855, 264630, 264636, 264558, 264566, 22278995, 264508, 264758, 18108351, 18108370, 263974, 18108374, 264634, 56182323, 83373044, 60432113
1714	87420048 (3427, 3428)				22278997, 264757, 21906765, 265020, 265021, 264692, 56528486
1715	94260257 (3429, 3430)	Novel Protein sim. GBank gij5689537[dbj BAA83052.1 - (AB029023) KIAA1100 protein [Homo sapiens]		UNCLASSIFIED	264509, 264905, 264906, 264907, 264908, 264909, 264910, 264591, 265011, 264766, 264768, 264769, 264691, 264692, 264632, 264634, 264635, 264636, 264637, 264558, 264639, 264564
1716	87400449 (3431, 3432)	Novel Protein sim. GBank gij4589468[dbj BAA76761.1 - (AB012808) mBOCT [Mus musculus]		transport	56182575, 29331824, 60432289, 264109, 264909, 265007, 284600, 265019, 264886, 265020, 264693, 55811576, 264558, 60432113, 22279002

1717	87563223 (3433, 3434)	Novel Protein sim. GBank gij276541 embjCAA74749 - (Y14391) GTP-binding protein [Homo sapiens]		UNCLASSIFIED	264569, 264259, 29331825, 29331826, 29331828, 35696052, 264509, 264905, 264907, 264908, 264909, 264512, 265009, 264910, 264592, 264595, 264758, 264759, 265017, 264681, 264764, 264766, 264688, 18108357, 35695917, 264690, 264692, 264693, 264628, 264629, 35695423, 264630, 264631, 264635, 264636, 18108380, 264638, 264639, 18108388, 18108391
1718	87032628 (3435, 3436)	Novel Protein sim. GBank gij2833262 spjQ14999 Y076_HUMAN - HYPOTHETICAL PROTEIN KIAA0076 (HA0936)		UNCLASSIFIED	265011, 264681, 264682, 264684, 264688, 264689, 21908765, 265021, 264691, 33657023, 264693, 18108370, 35695855, 264632, 264634, 264636, 18108388, 22279002
1719	94315259 (3437, 3438)	Novel Protein sim. GBank gij4505197 refjNP_003473.1 pMLL2 - myeloid/lymphoid or mixed-lineage leukemia 2		UNCLASSIFIED	18108396, 65274572, 35696286, 22278997, 60432049, 56182181, 66714117, 60432289, 29331826, 35696052, 29331828, 264906, 29331830, 56182435, 264592, 60431735, 60433438, 55812038, 264759, 265010, 264600, 264601, 265017, 264448, 264764, 264288, 264769, 21906766, 21906769, 55811957, 265020, 265021, 52644150, 33657023, 33657109, 33657182, 27466262, 33657349, 35695763, 18108370, 60431528, 18108374, 35696423, 55811576, 35695855, 264631, 56182323, 264559, 264584, 264486, 56182575, 22278999, 264259, 29331824, 60432289, 29331827, 35696052, 264508, 264905, 264906, 264907, 264908, 264909, 264511, 264810, 264758, 21806754, 265011, 264601, 264760, 264782, 264288, 264766, 264886, 18108357, 264689, 21906765, 55811957, 264693, 20281149, 264629, 18108374, 55811576, 65274791, 264630, 20281071, 264634, 264635, 264636, 264637, 264556, 264638, 264639, 56182323, 87168518
1720	94853063 (3439, 3440)	Novel Protein sim. GBank gij2129478 prijS51939 - chitinase (EC 3.2.1.14) precursor - beet		UNCLASSIFIED	22278994, 22278999, 29331822, 265006, 265007, 265008, 55812038, 21906754, 60174639, 265011, 87168559, 18108351, 18108354, 21906765, 21906766, 21908768, 21908769, 265020, 33657109, 18108370, 18108374, 264556, 60170394, 83373044, 18108385, 264486
1721	91722288 (3441, 3442)	Novel Protein sim. GBank gij4886461 embjCAB43381.1 - (AL050280) hypothetical protein [Homo sapiens]		UNCLASSIFIED	56994075, 29331824, 29331828, 265009, 18108351, 21906768, 265020, 33657023, 18108374, 83373044
1722	94134549 (3443, 3444)	Novel Protein sim. GBank gij5689375 dbjBAA82968.1 - (AB030644) tudor repeat associator with PCTAIRE 2 [Rattus norvegicus]	Contains protein domain (PF00567) - Tudor domain	kinase	

1723	95356181 (3445, 3446)	Novel Protein sim. GBank gi 4426962 gb AAD20633 - (AF126082) Arf-like 2 binding protein BART1 [Homo sapiens]		UNCLASSIFIED	264488, 264687, 264769, 21906767, 21906768, 56182575, 55811957, 22278997, 22278998, 265020, 264259, 264692, 33657023, 29331822, 29331824, 29331825, 60432289, 33657182, 33856970, 33857349, 29146499, 284508, 264907, 18108370, 264629, 264908, 264909, 18108374, 55811576, 264510, 285008, 264511, 265007, 264910, 264632, 264591, 60432229, 284592, 60433356, 264594, 60433438, 264595, 83373044, 55812038, 33109954, 33657084, 87168518, 87168474, 265010, 265011, 87168559, 264600, 60432113, 264604, 265019, 264583, 264448, 264682, 264566, 264764, 264288, 264567, 264486, 264389, 264766
1724	87713808 (3447, 3448)	Novel Protein sim. GBank gi 2340162 (AF005083) - dsRBP-ZFa [Xenopus laevis]	Contains protein domain (PF000086) - Zinc finger, C2H2 type	UNCLASSIFIED	264905, 18108359, 264693, 264628, 264631, 264838, 264555, 264558, 264558, 264559, 35696286, 264259, 29331822, 35696052, 284508, 264509, 264905, 264906, 264907, 284908, 264909, 264910, 265009, 284591, 264601, 264760, 18108351, 264681, 264764, 264288, 264766, 264768, 21906769, 35695917, 264628, 35696423, 264630, 264631, 264632, 264635, 264638, 264638, 87168518, 264566
1725	85655191 (3449, 3450)	Novel Protein sim. GBank gi 3152662 (AF064604) - KE03 protein [Homo sapiens]	Contains protein domain (PF000023) - homeobox Ank repeat		
1726	85764255 (3451, 3452)	Novel Protein sim. GBank gi 4889348 gb AAD27861.1 AF13256 - (AF132562) BcDNA.LD14270 [Drosophila melanogaster]		UNCLASSIFIED	29146498, 264683, 264689
1727	85286382 (3453, 3454)			UNCLASSIFIED	264905, 265011, 264689, 21906768

1728	95348515 (3455, 3456)	Novel Protein sim. GBank gij4406549gb AAD200271 - (AF131738) Unknown [Homo sapiens]	UNCLASSIFIED	60421479, 18108397, 56182575, 22278995, 56994075, 35696286, 22278997, 22278998, 22278999, 264094, 60432049, 264259, 29331822, 29331824, 56182181, 29331825, 60432289, 29331826, 29331827, 35696052, 264905, 264906, 264907, 29331830, 66712502, 264908, 56182435, 264511, 265008, 265009, 60433356, 33657402, 60433438, 264759, 21908754, 87168474, 265010, 265011, 87168559, 265017, 265018, 265019, 55811150, 264681, 264448, 264682, 264783, 264683, 264288, 264684, 264369, 264685, 264766, 264687, 264769, 21908764, 264689, 21908765, 21908766, 21908767, 21908768, 35695917, 265020, 265021, 265022, 264535, 264691, 264692, 33657023, 264693, 33657109, 18108370, 264628, 263972, 264629, 18108374, 18108376, 55810764, 65274791, 35695855, 264631, 264634, 264635, 60431850, 264636, 264638, 60170394, 264639, 83373044, 58526486, 87168518, 60432113, 22279000, 22279002, 264564, 264566
1729	91227948 (3457, 3458)	Novel Protein sim. GBank gij854065 emb CAA583371 - (X63413) U88 [Human herpesvirus 8]	UNCLASSIFIED	284906, 264907, 264908, 264511, 264555, 83373044, 264596, 264566
1730	85483474 (3459, 3460)		UNCLASSIFIED	29331822, 29331825, 29331828, 264907, 264908, 264909, 265011, 264784, 264629
1731	88266068 (3461, 3462)	Novel Protein sim. GBank gij831600 pir S47094 - hypothetical protein - rabbit	UNCLASSIFIED	52646842, 264907, 264909, 56182435, 55811386, 87168559, 265018, 265019, 264760, 52644229, 55811576
1732	91218878 (3463, 3464)	Novel Protein sim. GBank gij4240231 dbj BAA74894.1 - (AB020678) KIAA0871 protein [Homo sapiens]	struct	56182575, 29331822, 29331824, 29331827, 66712502, 264591, 33657402, 60433356, 265019, 21908768, 21908769, 35695917, 265020, 265021, 264636, 56182323
1733	87617178 (3465, 3466)	Novel Protein sim. GBank gij1575756 (U70674) - m-Numb [Mus musculus]	synthase	264907, 264910, 33657402, 265010, 264681, 264683, 264684, 264686, 264769, 264691, 264692, 264693, 264628, 264636, 264558
1734	87795261 (3467, 3468)			264693

1735	88318638 (3468, 3470)	Novel Protein sim. GBank gij4836807 gb AAD30586.1 AF14679 - (AF146793) PFT27 [Mus musculus]	Contains protein domain (PF01169) - Uncharacterized protein family UPF0016		264488, 18108394, 18108398, 22278998, 60432049, 264259, 29331822, 264908, 265008, 265007, 265008, 265009, 264591, 33657402, 265010, 265011, 87168559, 265017, 18108351, 264682, 18108354, 264769, 264689, 21906765, 21906768, 21906769, 29148629, 29148784, 265021, 265022, 52644150, 18108364, 18108365, 33657109, 18108370, 18108374, 18108380, 18108385, 87168518, 264563, 18108390
1736	95362884 (3471, 3472)	Novel Protein sim. GBank gij4885647 ref NP_005472.1 pTRAP - thyroid hormone receptor-associated protein complex component	UNCLASSIFIED		264480, 264259, 66714117, 66712502, 56182435, 265008, 265008, 264910, 60433356, 87168559, 265017, 265019, 18108351, 265020, 265022, 33657023, 33657109, 264555, 60431850, 264637, 60170394, 264558, 264639, 264564
1737	88165549 (3473, 3474)	Novel Protein sim. GBank gij2143607 p S68895 - B/K protein - rat	Contains protein domain (PF00168) - C2 domain	kinase	28331822, 28331830, 264591, 265011, 285018, 265019, 22279002
1738	85788811 (3475, 3476)	Novel Protein sim. GBank gij2225941 emb CAA69714 - (Y08460) Mdes protein [Mus musculus]	UNCLASSIFIED		264908, 264909, 265008, 264910, 264566
1739	87328576 (3477, 3478)		UNCLASSIFIED		35696052, 264603, 264557
1740	83592939 (3479, 3480)	Novel Protein sim. GBank gij4809 emb CAA44309 - (X02452) YCR601 [Saccharomyces cerevisiae]	traffic		264604, 21906764, 18108364, 264629, 35695855, 264636
1741	95010100 (3481, 3482)	Novel Protein sim. GBank gij4883898 gb AAD31695.1 AF13042 - (AF130420) serine protease-like protein isoform [Homo sapiens]	UNCLASSIFIED		60432289, 29331827, 264509, 265009, 60432229, 264759, 265017, 264767, 264688, 264689, 21906769, 265020, 33657109
1742	85788814 (3483, 3484)	Novel Protein sim. GBank gij4505183 ref NP_003667.1 pMLD - membrane fatty acid (lipid) desaturase	UNCLASSIFIED		264908, 264910, 264758, 265011, 264631, 264638, 264566
1743	86968475 (3485, 3486)				265017, 265020, 264692
1744	91224003 (3487, 3488)	Novel Protein sim. GBank gij728832 sp P39189 ALU2_HUMAN - III ALU SUBFAMILY SB WARNING ENTRY IIII	UNCLASSIFIED		22278998, 264508, 264907
1745	20290075 (3489, 3490)		UNCLASSIFIED		264558
1746	94326110 (3491, 3492)	Novel Protein sim. GBank gij731756 sp P36873 YHY6_YEAST - HYPOTHETICAL 175.8 KD PROTEIN IN GND1-IK1 INTERGENIC REGION	UNCLASSIFIED		65274791, 264639, 264559
1747	94324333 (3493, 3494)	Novel Protein sim. GBank gij1658503 (U75467) - Alu [Drosophila melanogaster]	transcript factor		52846842, 29331824, 29331825, 52644045, 56182435, 265007, 52646317, 87168474, 265018, 18108351, 264369, 264769, 264689, 35695917, 60170615, 264691, 33657023, 65274791, 35695855, 60170394, 22279000, 264482

1748	88003580 (3485, 3496)	Novel Protein sim. GBank gi 4504511 ref NP_001530.1 pHSJ2 - heat shock protein, DNAJ-like 2	Contains protein domain (PF00694) - eph DnaJ central domain (4 repeats)	264489, 56182575, 29331824, 56182435, 264112, 265007, 265019, 264764, 21906768, 265020, 264691, 55811576, 264635, 264555, 264556, 264557, 264559 264106
1749	83363091 (3497, 3498)	Novel Protein sim. GBank gi 5650780 gb AA045948.1 AF15196 - (AF15196) RGS protein RGS-17 (Gallus gallus)	Contains protein domain (PF00615) - oncogene Regulator of G protein signaling domain	
1750	94321664 (3499, 3500)	Novel Protein sim. GBank gi 4996894 gb AAC28444.2 - (AF065164) hyperpolarization-activated, cyclic nucleotide- gated channel 2 (Homo sapiens)		33657402, 264288, 52644150, 263974, 83373044
1751	83373058 (3501, 3502)	Novel Protein sim. GBank gi 2760161 dbj BAA24184 - (AB010054) outer arm dynein light chain 2 (Anthriscus crassispina)	Contains protein domain (PF00560) - ATPase associated Leucine Rich Repeat	265010, 264369
1752	86456530 (3503, 3504)	Novel Protein sim. GBank gi 3915482 sp P74348 YG29_SYN3 - HYPOTHETICAL 35.0 KD PROTEIN SLR1629	Contains protein domain (PF00849) - deaminase RNA pseudouridylate synthase	264510, 264593, 264682, 21906765, 18108370
1753	94235159 (3505, 3506)	Novel Protein sim. GBank gi 2852636 (AF007155) - unknown (Homo sapiens)	Contains protein domain (PF01553) - phosphatase Acyltransferase	56994075, 22278996, 264908, 60170831, 264682, 264764, 264369, 264288, 264685, 264687, 21906768, 264692, 264693, 65274620, 65274791, 35695855, 264637, 264564
1754	88095323 (3507, 3508)	Novel Protein sim. GBank gi 731421 sp P39981 YEH4_YEAST - HYPOTHETICAL 53.3 KD PROTEIN IN HXT8-CAN1 INTERGENIC REGION	transport	264488, 35696286, 264509, 264906, 264907, 264908, 264909, 264511, 264910, 264591, 33657402, 264594, 264757, 264758, 264600, 264604, 264762, 264763, 264685, 264768, 264691, 264628, 35696423, 264632, 264634, 264637, 264638, 263981, 264558, 264639, 264563, 264564, 264565, 264566, 264567 264686
1755	79470282 (3509, 3510)	Novel Protein sim. GBank gi 1176422 (U43194) - rhophilin [Mus musculus]	UNCLASSIFIED	
1756	82962614 (3511, 3512)	Novel Protein sim. GBank gi 4432860 gb AAD20708 - (AC006300) putative glucose-induced repressor protein [Arabidopsis thaliana]		52646842, 22278994, 22278995, 56994075, 22278996, 22278997, 264259, 29331822, 60432289, 29331827, 33656970, 265006, 265009, 60433229, 60433356, 60433438, 33109954, 21906754, 265017, 265018, 265019, 264448, 264369, 264288, 21906765, 21906766, 21906767, 21906768, 21906769, 265020, 265021, 265022, 264692, 27486262, 27486264, 18108376, 20281152, 284558, 18108388, 87168518, 60432113, 22279000, 22279002, 264482
1757	95357380 (3513, 3514)	Novel Protein sim. GBank gi 5441615 emb CAB46856.1 - (AJ388557) zinc finger protein [Canis familiaris]	Contains protein domain (PF00096) - dna_rna_bind Zinc finger, C2H2 type	22278997, 264259, 60432289, 29331827, 264908, 52644045, 265008, 264593, 265019, 264766, 21906768, 65274620, 18108385, 60432113, 264566, 264487

1758	87612971 (3515, 3516)	Novel Protein sim. GBank gij3881040 emb CAA15403 - (AL021497) predicted using GeneFinder [Caenorhabditis elegans]		UNCLASSIFIED	22278994, 22278999, 29331822, 29331824, 29331825, 33658970, 264508, 265006, 265007, 265009, 264591, 33657402, 33109954, 87188474, 264600, 265017, 265018, 21906769, 265020, 265021, 33657023, 33657109, 264629, 18108374, 35695855, 284632, 52844332, 22279002, 284583
1759	36894372 (3517, 3518)			UNCLASSIFIED	264759
1760	87329716 (3519, 3520)	Novel Protein sim. GBank gij5262748 emb CAB45688.1 - (AJ133120) Proline rich synapse associated protein 2 [Rattus norvegicus]		UNCLASSIFIED	56182575, 60432049, 35696052, 264905, 264906, 264907, 264908, 264909, 265006, 265009, 264910, 60432229, 284592, 284595, 55812038, 264758, 264762, 18108351, 264764, 264766, 264768, 264769, 21906765, 55811857, 35695917, 264690, 264692, 264628, 264629, 55811576, 35696423, 264632, 264634, 264636, 264557, 264639, 60432113, 264585, 284486
1761	87409586 (3521, 3522)	Novel Protein sim. GBank gij127749 sp P10569 MYSC_ACACA - MYOSIN IC HEAVY CHAIN	Contains protein domain (PF00618) - Guanine nucleotide exchange factor for Ras-like GTPases; N-terminal motif	UNCLASSIFIED	29331822, 264910, 264685, 264686
1762	95319887 (3523, 3524)	Novel Protein sim. GBank gij3169158 (AC004770) - BC269730_2 [Homo sapiens]	Contains protein domain (PF00173) - Heme-binding domain in cytochrome b5 and oxidoreductases	desaturase	22278999, 264259, 264905, 264907, 60170831, 265010, 265011, 265017, 264448, 21906765, 21906766, 21906767, 21906768, 265021, 264690, 33657109, 18108374, 284558, 60170394
1763	91224013 (3525, 3526)	Novel Protein sim. GBank gij4809026 pb AAD30062.1 - (AF132856) suppressor of G2 allele of stk1 homolog [Homo sapiens]			56181886, 28331825, 35696052, 264905, 264906, 264909, 264763, 264682, 264769, 35695917, 265022, 33657023, 18108374, 35696423, 264634
1764	87757697 (3527, 3528)	Novel Protein sim. GBank gij1360669 pir ICGHU1V - collagen alpha 1(V) chain precursor - human	Contains protein domain (PF01410) - Fibrillar collagen C-terminal domain	collagen	22278998, 264259, 35696052, 29331828, 56182435, 265008, 265017, 265018, 264448, 264288, 21906766, 21906767, 29148627, 35695917, 264691, 33657023, 60432113, 22279002
1765	91230091 (3529, 3530)	Novel Protein sim. GBank gij486806 pir S35503 - finger protein neutralized - fruit fly (Drosophila melanogaster)		UNCLASSIFIED	264488, 18108394, 22278995, 22278997, 22278999, 264259, 264104, 264508, 264905, 264907, 264511, 265007, 265008, 264910, 265009, 21906754, 265010, 265017, 264603, 265018, 265019, 18108351, 264682, 264448, 264369, 264288, 264766, 18108359, 21906766, 21906767, 29148627, 29148629, 35695917, 265020, 265021, 264692, 264628, 264629, 18108374, 263976, 264636, 83373044, 22279000, 22279002

1766	95081201 (3531, 3532)	Novel Protein sim. GBank gi 2499087 sp Q09332 UGGG_DROME - UDP- GLUCOSE:GLYCOPROTEIN GLUCOSYLTRANSFERASE PRECURSOR (DUGT)		glycoprotein	52645156, 87168559, 60170615, 33657023, 264693, 33657109, 27486261, 264555, 83373044
1767	87755998 (3533, 3534)	Novel Protein sim. GBank gi 4176443 emb CAA18263.1 - (AL022238) dJ1042K10.4 (novel protein) [Homo sapiens]		UNCLASSIFIED	265017, 265019, 264686, 264768, 265020, 264892
1768	80253216 (3535, 3536)			UNCLASSIFIED	29331824, 29331825, 264591, 56182323
1769	87388988 (3537, 3538)			UNCLASSIFIED	264563
1770	95413144 (3539, 3540)	Novel Protein sim. GBank gi 115204 sp P00736 C1R_HUMAN - COMPLEMENT C1R COMPONENT PRECURSOR	Contains protein domain (PF00089) - Trypsin	complement	264488, 264768, 264769, 56182575, 55811957, 264690, 264691, 35696052, 264905, 264509, 264906, 264907, 264628, 264908, 264909, 264910, 264634, 264635, 264636, 264556, 264757, 264758, 55812038, 65274444, 264760, 264563, 264762, 264764, 264684, 264766
1771	94233542 (3541, 3542)	Novel Protein sim. GBank gi 3914191 sp P56558 OGT1_RAT - UDP-N- ACETYLGLUCOSAMINE-PEPTIDE N- ACETYLGLUCOSAMINYLTRANSFERASE 110 KD SUBUNIT (O-GLCNAC TRANSFERASE P110 SUBUNIT)	Contains protein domain (PF00515) - TPR Domain	transferase	264758, 264600, 264369, 55811957, 265020, 83373044, 22279000
1772	87643510 (3543, 3544)	Novel Protein sim. GBank gi 4959442 gb AAD34351.1 AF12136 - (AF121360) DNZDHC/NEW1 zinc finger protein 11 [Drosophila melanogaster]	Contains protein domain (PF01529) - DHH zinc finger domain		22278998, 29331828, 33109954, 265018, 265019, 264764, 21906765, 265020, 265021, 264556
1773	94116824 (3545, 3546)	Novel Protein sim. GBank gi 3978464 (AF085693) - G protein-coupled receptor kinase-associated ADP ribosylation factor GTPase-activating protein [Rattus norvegicus]	Contains protein domain (PF01412) - Putative GTP-ase activating protein for Arf	potassium_channel	65274572, 56182575, 22278996, 35696286, 22278999, 264259, 29331824, 60424269, 29331825, 60432289, 35696052, 264106, 264509, 264906, 264907, 29331830, 264908, 52644045, 264511, 265006, 265007, 265008, 60170831, 60433438, 264758, 55811386, 87168559, 265017, 264604, 265019, 55811150, 264288, 56181562, 264689, 21906766, 21906767, 21906768, 21906769, 55811957, 265020, 265022, 52644150, 264691, 33657023, 264692, 264693, 60431528, 35696423, 35695655, 264636, 56182323, 18108387, 56526486, 22279000, 22279002, 264563, 264564, 264565, 264566, 264567
1774	94232573 (3547, 3548)	Novel Protein sim. GBank gi 2495899 sp Q15034 Y032_HUMAN - HYPOTHETICAL PROTEIN KIA0032	Contains protein domain (PF00415) - Regulator of chromosome condensation (RCC1)	UNCLASSIFIED	65274572, 56182575, 35696052, 55812038, 33109954, 21906754, 265017, 21906767, 21906768, 21906769, 265020, 264691, 264636, 56182323, 22279002

1775	95359330 (3549, 3550)	Novel Protein sim. GBank gll1469199[dbj BAA094971] - (D50928) The KIAA0138 gene product is novel. [Homo sapiens]		UNCLASSIFIED	65274572, 56182575, 56994075, 35696286, 22278997, 29331822, 29331828, 60432289, 29331828, 35696052, 29331830, 66712502, 264828, 56182435, 264511, 265007, 265009, 60170831, 60432229, 60433438, 55812038, 21906754, 85858542, 87168559, 264601, 265017, 265018, 265019, 264762, 264448, 264288, 264689, 21906785, 21906786, 21906787, 21906788, 265020, 265021, 265022, 264691, 33657023, 264692, 33657109, 27486261, 33657349, 18108370, 18108377, 35696423, 55811576, 35695855, 264632, 264634, 264636, 264639, 56182323, 83373044, 55526486, 87168518, 60432113, 22279000, 22279002, 264482, 264486, 264910
1776	94133756 (3551, 3552)	Novel Protein sim. GBank gll4589676[dbj BAA76857.1] - (AB023230) KIAA1013 protein [Homo sapiens]			
1777	87447171 (3553, 3554)	Novel Protein sim. GBank gll3219939[dbj P87115]YDK9 - HYPOTHETICAL 116.5 KD PROTEIN C20G8.09C IN CHROMOSOME 1	nucl_rept		56994075, 29331826, 265008, 87168474, 265017, 265018, 264761, 55811150, 264764, 56181562, 264689, 21906785, 21906788, 21906789, 35695917, 264690, 33657023, 35695763, 60431528, 35696423, 55811576, 35695855, 22279000, 22279002, 264564
1778	94851824 (3555, 3556)	Novel Protein sim. GBank gll3875648[emb CAA91454.1] - (Z56561) Similarity to Human rab13 protein (PIR Acc. No. A49647). Contains the ATP/GTP-binding site motif (PROSITE PS00017). cDNA EST EMBL:M89412 comes from this gene; cDNA EST YK21299.3 comes from this gene; cDNA EST YK21299...		UNCLASSIFIED	29331826, 29331827, 35696052, 264512, 265007, 265009, 265017, 265019, 264762, 18108351, 264769, 21906765, 21906768, 21906767, 21906768, 21906769, 265020, 265021, 264691, 264693, 18108370, 264556, 83373044
1779	94133758 (3557, 3558)	Novel Protein sim. GBank gll4589676[dbj BAA76857.1] - (AB023230) KIAA1013 protein [Homo sapiens]		UNCLASSIFIED	29148627, 35696286, 29147620, 265006, 265007, 265008, 18108385, 65274727, 264482, 264369, 264768
1780	87023497 (3559, 3560)		Contains protein domain (PF00807) - Apidaecin	UNCLASSIFIED	264107, 33657109, 56526486
1781	84047477 (3561, 3562)			UNCLASSIFIED	264508, 264906, 264639
1782	88094807 (3563, 3564)	Novel Protein sim. GBank gll729225[dbj P41237 CTXN_RAT - CORTEXIN			264259, 29331822, 264508, 264905, 264906, 264907, 264908, 265007, 265009, 264910, 264591, 264758, 264764, 264288, 264768, 264769, 264635, 264636, 264637, 264639, 264583
1783	85717905 (3565, 3566)	Novel Protein sim. GBank gll2257543[dbj BAA21436] - (AB004538) protein arginine N-methyltransferase [Schizosaccharomyces pombe]	interferon		264768

1784	95197093 (3567, 3568)	Novel Protein sim. GBank gij1755049 (U55042) - myosin X [Bos laurus]	Contains protein domain (PF00169) - struct PH domain	35696286, 264259, 35896052, 264508, 264905, 264908, 264907, 66712502, 264908, 264909, 265007, 265008, 265009, 264910, 264591, 264594, 264757, 264758, 264759, 265010, 265011, 264601, 264602, 264604, 264605, 18108351, 264762, 264763, 264764, 264369, 264766, 264687, 264768, 264688, 21906768, 35695917, 264690, 264691, 264692, 264693, 264628, 18108374, 35696423, 264631, 264632, 264635, 264637, 264638, 264639, 18108385, 22279000, 22279002, 264565, 264566, 264488
1785	95357475 (3569, 3570)	Novel Protein sim. GBank gij4589552[bj]BAA76798.1] - (AB023171) KIAA0954 protein [Homo sapiens]	UNCLASSIFIED	65274572, 264259, 29331822, 29331824, 29331825, 29331827, 29331828, 264905, 264906, 264908, 66712502, 56182435, 264511, 265007, 60433356, 55811150, 264683, 264369, 264687, 52644229, 21906767, 52644150, 33657023, 65274620, 33657182, 65274791, 35695855, 264555, 65274727, 22279002
1786	85286465 (3571, 3572)	Novel Protein sim. GBank gij117788[sp]P28770(CYA4_RAT ADENYLATE CYCLASE, TYPE IV (ATP PYROPHOSPHATE-LYASE) (ADENYLYL CYCLASE)	UNCLASSIFIED	264908, 35696423, 264636
1787	87434784 (3573, 3574)	Novel Protein sim. GBank gij3877175[emb]CAA90338.1] - (Z50028) cDNA EST yk321h8.5 comes from this gene; cDNA EST EMBL:D88896 comes from this gene; cDNA EST yk395f9.5 comes from this gene [Caenorhabditis elegans]	UNCLASSIFIED	264488, 264905, 264908, 264909, 264595, 264764, 264766, 264692, 60431528, 264629, 264636, 264564, 264566
1788	91228779 (3575, 3576)		UNCLASSIFIED	264488, 83373044
1789	88094529 (3577, 3578)	Novel Protein sim. GBank gij2088669 (AF003130) - F55A12.9 gene product [Caenorhabditis elegans]	UNCLASSIFIED	264488, 29331828, 264909, 18108351, 264288, 265021, 264555, 264638
1790	82489734 (3579, 3580)			35696052, 264905, 264906, 264907, 264908, 264909, 265008, 264910, 264758, 265011, 265019, 264764, 264766, 264769, 264628, 264635

1781	95197259 (3581, 3582)	Novel Protein sim. GBank gij2114321dbj BAA20037 - (D88733) membrane glycoprotein [Equine herpesvirus 1]	Contains protein domain (PF00047) - Immunoglobulin domain	glycoprotein	264488, 264686, 264687, 264768, 18108394, 264769, 18108397, 264259, 264691, 264892, 33657023, 264893, 264509, 264905, 264906, 264628, 264907, 264629, 264908, 264909, 264510, 265006, 264511, 265008, 264630, 265009, 264631, 264910, 264632, 264634, 264635, 264555, 264636, 264592, 264637, 264593, 264638, 18108381, 264639, 264758, 265010, 265011, 264602, 22279000, 264604, 264760, 264564, 264681, 264782, 264565, 264763, 264683, 264586, 264764, 264288, 264684, 264567, 18108354, 18108391, 264685, 264766
1782	87702680 (3583, 3584)	Novel Protein sim. GBank gij4337106 gb AAD18082 - (AF129756) BAT4 [Homo sapiens]	Contains protein domain (PF01585) - G-patch domain	UNCLASSIFIED	22278997, 264259, 264508, 265007, 33657402, 87168559, 264369, 33657023, 35695855, 20281071, 264559, 18108387, 87168518
1783	95337877 (3585, 3586)	Novel Protein sim. GBank gij5579331 gb AAD45504.1 AF14573 - (AF145732) endoplasmic reticulum alpha-mannosidase I [Homo sapiens]	Contains protein domain (PF01532) - Glycosyl hydrolase family 47	ATPase associated	65274572, 22278995, 22278996, 22278997, 22278998, 264093, 264259, 29331824, 66714117, 60432289, 29331827, 29331828, 264103, 264105, 29331830, 265007, 264910, 265009, 60170831, 60433356, 21908754, 265010, 265017, 265019, 264681, 264682, 264288, 52644228, 21908765, 21908768, 21908767, 21908768, 21908769, 265020, 265021, 265022, 60170615, 52644150, 33657023, 33657109, 18108370, 18108374, 65274791, 20281071, 60432113, 22279000, 264482, 264584
1784	87759806 (3587, 3588)	Novel Protein sim. GBank gij4914604 emb CAB43677.1 - (AL050389) hypothetical protein [Homo sapiens]	Contains protein domain (PF01798) - Putative snRNA binding domain	UNCLASSIFIED	18108394, 22278995, 22278999, 264259, 29331822, 29331824, 29331825, 29146498, 29146499, 264508, 264905, 52644045, 264112, 265006, 265008, 264910, 60433356, 264757, 55812038, 87168474, 265011, 265017, 18108351, 264763, 264448, 264683, 264369, 21908765, 21908766, 21908767, 21908769, 29148784, 35695917, 60170615, 33657023, 264629, 18108374, 18108376, 35696423, 35695855, 264556, 284557, 264638, 264558, 18108385, 264584, 264632, 264635, 264636, 264595, 264596, 264907, 264566, 264909
1785	79747856 (3589, 3590)			UNCLASSIFIED	264907, 264566, 264909
1786	86599466 (3591, 3592)	Novel Protein sim. GBank gij585084 sp Q07803 EFGM_RAT - ELONGATION FACTOR G, MITOCHONDRIAL PRECURSOR (MEF-G)		glycoprotein	264488, 264907, 264909, 264594, 264595, 264766, 264687, 21906765, 21906767, 264628, 264630, 264559

1797	91223219 (3593, 3594)	Novel Protein sim. GBank gii1842111 (U87586) - decoy (Arabidopsis thaliana)		ribosomalprot	22278996, 22278997, 22278998, 22278999, 28331822, 264910, 60170831, 21906754, 52644229, 21906765, 21906768, 21906769, 35695917, 265022, 52644150, 264691, 38657023, 263967, 33657109, 22279000
1798	91221276 (3595, 3596)	Novel Protein sim. GBank gii2832806(dbj)BAA24608.1] - (D89340) dipeptidyl peptidase III [Rattus norvegicus]		peptidase	22278994, 56994075, 22278997, 22278998, 22278999, 264259, 29331826, 60432289, 29331828, 33656970, 265008, 60432229, 264757, 60433438, 21806754, 33657084, 87168559, 265017, 18108351, 264682, 264448, 264288, 21906765, 21906766, 21908767, 21908768, 21908769, 35695917, 265020, 265021, 33657023, 33657182, 27486261, 27486265, 33657349, 263973, 18108374, 55811576, 35695855, 18108385, 87168518, 22279000, 264486
1799	86321713 (3597, 3598)	Novel Protein sim. GBank gii5689541(dbj)BAA83054.1] - (AB029025) KIAA1102 protein [Homo sapiens]		eph	284908, 21906754, 21906767, 21906769, 265020, 33657023, 264692, 264693, 264404, 22279000
1800	87080116 (3599, 3600)	Novel Protein sim. GBank gii4690679(gb)AAD27729.1 AF13295 - (AF132954) CGI-20 protein [Homo sapiens]		UNCLASSIFIED	284691, 264556, 264566
1801	95060723 (3601, 3602)	Novel Protein sim. GBank gii134920(spl)P21997 SSGP_VOLCA - SULFATED SURFACE GLYCOPROTEIN 185 (SSG 185)			52644045, 265007, 264632
1802	87771012 (3603, 3604)	Novel Protein sim. GBank gii134920(spl)P21997 SSGP_VOLCA - SULFATED SURFACE GLYCOPROTEIN 185 (SSG 185)			35696286, 66714117, 264508, 264509, 56182435, 264512, 18108351, 264688, 55811957, 264692, 55811576, 35695855, 264486
1803	95060725 (3605, 3606)	Novel Protein sim. GBank gii4690679(gb)AAD27729.1 AF13295 - (AF132954) CGI-20 protein [Homo sapiens]			284686, 264488, 264687, 264489, 264768, 264769, 264689, 21906769, 35696286, 35695917, 264259, 264691, 264692, 264693, 20281099, 18108364, 35696052, 264508, 264509, 264905, 264906, 18108370, 264628, 264907, 66712502, 264908, 264909, 18108374, 18108376, 35696423, 35695855, 264510, 264511, 265006, 265007, 264512, 265008, 264910, 264631, 264632, 264634, 264635, 264591, 264636, 264637, 264592, 264638, 264593, 264639, 264594, 83373044, 264758, 264596, 18108385, 18108387, 265011, 264760, 264563, 18108351, 264762, 264564, 264448, 264565, 264763, 264683, 264764, 264566, 264288, 264486, 264567, 264765, 264766

1804	87770203 (3607, 3608)	Novel Protein sim. GBank gi 3879914 emb CAA98538.1 - (Z74043) predicted using GeneFinder; cDNA EST EMBL:C13850 comes from this gene; cDNA EST EMBL:C11575 comes from this gene; cDNA EST yk34314.5 comes from this gene [Caenorhabditis elegans]			52646365, 22278997, 22278999, 264905, 264908, 264909, 264910, 21906754, 264766, 21906765, 21906768, 35695917, 265020, 265022, 264691, 264637, 264639, 22279000, 264584, 264566
1805	95330375 (3609, 3610)	Novel Protein sim. GBank gi 5453644 ref NP_006461.1 pEBBP - estrogen-responsive B box protein			29331824, 29331825, 29331826, 29331827, 29331828, 87168559, 264288, 264687, 52644229, 35696423, 264636, 60432113
1806	94133782 (3611, 3612)	Novel Protein sim. GBank gi 4589676 dbj BAA76857.1 - (AB023230) KIAA1013 protein [Homo sapiens]	struct		264094, 264105, 264908, 35698423, 265006, 265007, 265008, 264555, 264592, 265011, 265018, 264369
1807	86943032 (3613, 3614)				29331824, 264908, 264910, 33657023, 263978
1808	87642711 (3615, 3616)	Novel Protein sim. GBank gi 4684079 emb CAB43235.1 - (AL050008) hypothetical protein [Homo sapiens]	UNCLASSIFIED		264488, 35696286, 66714117, 35696052, 66712502, 264592, 60433438, 52644296, 265010, 264683, 264369, 264689, 55811957, 35695917, 33657109, 35695763, 55810764, 18108379, 35696423, 35695855, 56182323, 264563, 264564, 264487
1809	95321468 (3617, 3618)	Novel Protein sim. GBank gi 1916927 (U87965) - putative G protein [Mus musculus]	UNCLASSIFIED		264594, 55811150, 264686, 29148629, 29148784, 264690, 264629, 18108374, 264556, 264557, 264558
1810	88086318 (3619, 3620)	Novel Protein sim. GBank gi 1352944 sp P47179 YJ9P_YEAST - HYPOTHETICAL 118.4 KD PROTEIN IN BAT2-DAL5 INTERGENIC REGION PRECURSOR	UNCLASSIFIED		264488, 35696052, 264905, 264906, 264907, 264908, 264909, 264511, 265009, 264910, 264592, 264593, 264594, 33657402, 264757, 264595, 264758, 264596, 264759, 264600, 264601, 264762, 264683, 264764, 264288, 264684, 264766, 264767, 264686, 264768, 264687, 264769, 264689, 265021, 264690, 264691, 264693, 264628, 264629, 18108374, 264630, 264631, 264632, 264634, 264635, 264636, 264637, 264638, 264639, 264563, 264566, 264486, 264567
1811	88086272 (3621, 3622)	Novel Protein sim. GBank gi 2134984 pir j137275 - death-associated protein kinase (EC 2.7.1.-) - human	kinase Ank repeat	Contains protein domain (PF00023) -	264488, 264259, 264508, 264509, 264905, 264906, 264907, 56182435, 264511, 264512, 264910, 264758, 265011, 264600, 264604, 18108354, 264766, 264686, 264769, 264534, 60170615, 33657023, 264629, 264631, 264639, 264563, 264482, 264483
1812	78245772 (3623, 3624)				29331822, 29331824, 265018, 18108351, 21906769

1813	88090972 (3625, 3626)	Novel Protein sim. GBank gi 501636 gb AAD38326.1 AF073727 - (AF073727) EH domain-binding mitotic phosphoprotein [Homo sapiens]	Contains protein domain (PF01417) - ENTH domain	glucoamylase	56182575, 264259, 29331824, 56714117, 29331828, 35896052, 284509, 264905, 264906, 264907, 264908, 56712502, 264909, 265007, 264910, 264591, 264593, 55812038, 265011, 265018, 264760, 264682, 264764, 264683, 264369, 264766, 264768, 264769, 21906766, 21906768, 264691, 264693, 18108374, 35695855, 264634, 264635, 264637, 264639, 284559, 22279000, 22279002, 284566
1814	88176047 (3627, 3628)	Novel Protein sim. GBank gi 3843608 (AC005395) - hypothetical protein [Arabidopsis thaliana]		UNCLASSIFIED	264488, 35696286, 22278998, 264092, 264094, 264259, 29331822, 29331824, 29331825, 60432289, 29331826, 29331827, 29331828, 264105, 264107, 52644045, 56182435, 265009, 60432229, 60433356, 87168474, 87168559, 264368, 264288, 21906765, 35695917, 285021, 285022, 33657023, 33657109, 18108374, 35696423, 264638, 55525486, 264482
1815	85296473 (3629, 3630)	Novel Protein sim. GBank gi 117788 sp P26770 CYA4_RAT ADENYLATE CYCLASE, TYPE IV (ATP PYROPHOSPHATE-LYASE) (ADENYLYL CYCLASE)		slruct	22278998, 264508, 284509, 264907, 264908, 264910, 265011, 264760, 264766, 264634, 264636
1816	83738845 (3631, 3632)	Novel Protein sim. GBank gi 1178623 sp P41846 YO96_CAEEL - HYPOTHETICAL 93.9 KD PROTEIN T20812.6 IN CHROMOSOME III		UNCLASSIFIED	18108394, 18108397, 264509, 264907, 264908, 264909, 265009, 264591, 265011, 265017, 264687, 264689, 265022, 264691, 18108362, 18108368, 18108370, 18108374, 18108379, 264635, 264557, 264564, 264567
1817	88095268 (3633, 3634)	Novel Protein sim. GBank gi 3766377 emb CAA21429 - (AL031907) hypothetical protein [Schizosaccharomyces pombe]	Contains protein domain (PF00400) - WD domain, G-beta repeat	histone	264488, 22278997, 22278999, 60432049, 29331822, 29331824, 60432289, 52644045, 60170831, 265017, 265018, 265019, 18108351, 264682, 52644229, 21906765, 21906767, 21906768, 52644150, 33657023, 33657109, 27486262, 18108370, 18108374, 60170394, 56182323, 22279002
1818	85806775 (3635, 3636)	Novel Protein sim. GBank gi 3879121 emb CAA94370 - (Z70310) predicted using GeneFinder. Similarity to Mouse ankyrin (PIR Acc. No. S37771). cDNA EST EMBL: T01923 comes from this gene; cDNA EST EMBL: D32335 comes from this gene; cDNA EST EMBL: D32723 comes from this gene; cDNA EST E...	Contains protein domain (PF00023) - Ank repeat	transcriptfactor	35896286, 60433356, 264758, 264369, 264686, 21906789, 264693, 264632
1819	87759572 (3637, 3638)	Novel Protein sim. GBank gi 5031865 ref NP_005771.1 pLHFP - lipoma HMGIC fusion partner		UNCLASSIFIED	22278995, 22278997, 22278999, 264259, 29331826, 264908, 265007, 265008, 265009, 60432229, 265017, 265018, 265019, 264448, 264288, 21906768, 21906769, 265020, 18108381, 18108384, 22279000, 22279002, 264567

1820	87769455 (3639, 3640)				264905, 264907, 264594
1821	80431510 (3641, 3642)				264907, 264768, 263978
1822	91221523 (3643, 3644)	Novel Protein sim. GBank gi 4884130 emb CAB43272.1 - (AL050101) hypothetical protein [Homo sapiens]			22278995, 56994075, 22278996, 22278997, 22278998, 264259, 29331824, 29331825, 29331826, 35696052, 29331828, 264908, 29331830, 60170831, 264591, 264593, 60433356, 264596, 265017, 265019, 18108351, 264763, 264683, 21906765, 21906768, 21906769, 35695917, 265020, 265021, 33657023, 18108364, 18108370, 35695855, 22279000, 22279002, 264488, 264259, 264511, 264288, 264768, 264693, 35696423, 264634, 18108385, 264486
1823	85522330 (3645, 3646)			UNCLASSIFIED	
1824	86612025 (3647, 3648)	Novel Protein sim. GBank gi 477072 pir A48018 - mucin 7 precursor, salivary - human	Contains protein domain (PF00047) - Immunoglobulin domain	UNCLASSIFIED	264907, 264908, 264909, 264511, 264631, 264634, 264635, 264637, 264638, 264639, 264758, 264568
1825	87430125 (3649, 3650)	Novel Protein sim. GBank gi 3036803 emb CAA18493 - (AL022373) hypothetical protein [Arabidopsis thaliana]		UNCLASSIFIED	60432048, 264910, 264487
1826	91723612 (3651, 3652)	Novel Protein sim. GBank gi 4680885 gb AAD27732.1 AF13295 - (AF132957) CGI-23 protein [Homo sapiens]		ATPase-associated	52644507, 52645156, 52646842, 22278994, 22278996, 56994075, 264259, 60432049, 52645080, 35696052, 66712502, 52644045, 265008, 265009, 60432229, 60433356, 60433438, 52646317, 52644296, 265011, 87168559, 264448, 264288, 264369, 264688, 52644229, 264689, 21906765, 21906768, 265020, 60170615, 52644150, 33657023, 27486262, 27486264, 27486265, 35695763, 35696423, 35695855, 83373044, 87168518, 264404, 22279002
1827	81647212 (3653, 3654)				264758

1828	85074017 (3655, 3656)	Novel Protein sim. GBank gi 4503571 refNP_001419.1 pENO1 - endolase 1, (alpha)	Contains protein domain (PF00113) - Endo-ase	oncogene	264488, 52846842, 56182575, 22278996, 35696286, 22278997, 22278998, 264091, 264093, 60432049, 264259, 29331822, 29331824, 66714117, 29331825, 60432289, 29331826, 29331827, 29331828, 264105, 264508, 264907, 66712502, 52644045, 56182435, 265006, 264511, 264512, 265007, 265008, 265009, 60170831, 60432229, 264593, 60433358, 60433438, 264758, 33109954, 21906754, 87168474, 265010, 265011, 87168559, 265017, 265019, 264761, 264762, 264448, 264764, 264683, 264288, 264369, 18108355, 264768, 18108357, 18108358, 264688, 264769, 264689, 21906768, 21906769, 35695917, 265021, 60170615, 33657023, 33657349, 263972, 55811576, 35695855, 264635, 264555, 264556, 264638, 264557, 87168518, 22279000, 22279002, 264563, 264482, 264555, 264484, 264567 264508, 264634, 264509, 264482, 29331827, 264908, 265009, 264910
1829	80197720 (3657, 3658)				
1830	94312942 (3659, 3660)	Novel Protein sim. GBank gi 2246532 (U93872) - ORF 73, contains large complex repeat CR 73 [Kaposi's sarcoma- associated herpesvirus]		nuclease	52645156, 22278994, 22278995, 35696286, 22278996, 22278997, 22278998, 22278999, 29331822, 29331825, 35696052, 52846317, 52644298, 87168559, 265019, 21906765, 21906766, 21906767, 21906768, 21906769, 35695917, 265021, 33657023, 52645129, 33657109, 33657182, 27486261, 27486262, 35695763, 263974, 35696423, 35695855, 52844332
1831	94138063 (3661, 3662)			UNCLASSIFIED	29331824, 35696052, 29331830, 264595, 264758, 265010, 265019, 265022, 264693, 65274791 264602
1832	84521663 (3663, 3664)	Novel Protein sim. GBank gi 1330345 (U58755) - coded for by C. elegans cDNA yk34b1.5; coded for by C. elegans cDNA yk13h10.5; coded for by C. elegans cDNA yk46e8.5; coded for by C. elegans cDNA yk46d5.5; coded for by C. elegans cDNA yk43c2.5; coded for by C. elegans cDNA yk46e8....			

1833	95314184 (3665, 3666)	Novel Protein sim. GBank gjl5174413[ref]NP_006026.1 pCDC4 - CDC42-binding protein kinase beta (DMPK-like)	Contains protein domain (PF000069) - kinase Eukaryotic protein kinase domain	22278994, 22278997, 22278998, 22278999, 264259, 29331822, 29331824, 60432289, 29331827, 35696052, 29146499, 264508, 264509, 264906, 264907, 66712502, 264908, 5264045, 264909, 264512, 265008, 264591, 264593, 60433356, 21906754, 33657084, 265011, 265017, 264604, 265018, 265019, 264681, 18108351, 264683, 264288, 264685, 264766, 264687, 21906765, 21906766, 21906767, 21906768, 21906769, 29148629, 265020, 265021, 264690, 264692, 33657023, 65274620, 33657182, 27486264, 33657349, 65274781, 264634, 264635, 264556, 264557, 264558, 264559, 18108385, 56526486, 87168518, 60432113, 22279000, 22279002, 264563
1834	80562790 (3667, 3668)			264259, 264907, 264689, 22279000, 22279002
1835	94135718 (3669, 3670)		UNCLASSIFIED	22278998, 29331822, 29331826, 87168474, 264603, 21906768, 263976, 35695855, 83373044
1836	87348450 (3671, 3672)	Novel Protein sim. GBank gjl4759286[ref]NP_004268.1 pUCP4 - uncoupling protein 4	Contains protein domain (PF00153) - Mitochondrial carrier proteins	29331825, 264908, 265019, 264764, 264686, 21906765, 264635
1837	94234297 (3673, 3674)	Novel Protein sim. GBank gjl3334400[sp]Q24574 UBPE_DROME - UBIQUITIN CARBOXYL-TERMINAL HYDROLASE 64E (UBIQUITIN THIOLESTERASE 64E) (UBIQUITIN-SPECIFIC PROCESSING PROTEASE 64E) (DEUBIQUITINATING ENZYME 64E)	Contains protein domain (PF00443) - Ubiquitin carboxyl-terminal hydrolase family 2	22278995, 29146499, 265006, 265008, 265009, 265010, 264683, 21906765, 29148627, 29148629, 265020, 265021, 265022, 65274620, 18108370, 18108374, 264556, 18108385
1838	94324369 (3675, 3676)	Novel Protein sim. GBank gjl1362599[pr]A56154 - Abl substrate ena (enabled) - fruit fly (Drosophila melanogaster)	Contains protein domain (PF00568) - WH1 domain	29331822, 265017, 264760, 265020, 83373044
1839	87456508 (3677, 3678)	Novel Protein sim. GBank gjl2117310[emb]CAB09116.1 - (Z95820) hypothetical protein [Schizosaccharomyces pombe]	UNCLASSIFIED	60433438, 264601, 21906765, 21906766, 265021, 33657109, 264556
1840	87391708 (3679, 3680)	Novel Protein sim. GBank gjl127560[sp]P23249 MV10_MOUSE - PROTEIN MOV-10	UNCLASSIFIED	264693
1841	85818445 (3681, 3682)	Novel Protein sim. GBank gjl4572464[gb]AAD23834.1 AF123653 - (AF123653) FEZ1 [Homo sapiens]		56182575, 29331824, 29331826, 60433356, 264764, 264288, 33657023, 263967, 18108370, 18108374, 264631, 264555, 264556, 264639

1842	90982645 (3683, 3684)	Novel Protein sim. GBank gll1326268 (U58728) - C54H2.1 gene product [Caenorhabditis elegans]		UNCLASSIFIED	65274572, 29331822, 29331824, 29331825, 66714117, 29331826, 29331827, 264907, 264908, 52644045, 56182435, 264510, 265006, 265007, 265008, 264910, 60433356, 264757, 60433438, 55812038, 265017, 18108354, 264686, 264769, 33657023, 264693, 18108364, 33657109, 18108368, 264628, 55810764, 56182323, 18108384, 264563, 264564
1843	95292692 (3685, 3686)			UNCLASSIFIED	264488, 56182435, 264769, 29331826, 29331828, 264511, 265006, 265007, 264910, 264631, 264509, 264690, 264636, 264564, 264691, 60432229, 60432049, 264259, 264629, 33657023, 264486, 264909, 264567, 264595, 264766
1844	87444764 (3687, 3688)	Novel Protein sim. GBank gll2496887 [spIQ09232]YQ22_CAEEL - HYPOTHETICAL 32.0 KD PROTEIN C09F5.2 IN CHROMOSOME III		UNCLASSIFIED	264908, 265022, 33657023, 87168518, 22278002
1845	95096673 (3689, 3690)	Novel Protein sim. GBank gll1175494 [spIQ09819]YAC5_SCHPO - HYPOTHETICAL 45.0 KD PROTEIN C16C9.05 IN CHROMOSOME I	Contains protein domain (PF00628) - PHD-finger	transcriptfactor	264259, 29331824, 264907, 264908, 66712502, 264510, 265007, 265008, 55812038, 265018, 21906765, 52644150, 33657109, 264555, 264556, 264557, 56182323, 18108382, 83373044, 18108385, 264564
1846	84287872 (3691, 3692)	Novel Protein sim. GBank gll3881080 [emb]CAA21739] - (AL032657) similar to EGF-like domain; cDNA EST yk289a12.3 comes from this gene; cDNA EST EMBL.D35388 comes from this gene; cDNA EST yk331h6.5 comes from this gene; cDNA EST yk299a12.5 comes from this gene; cDNA EST yk467g8.5 c...	Contains protein domain (PF00008) - EGF-like domain	UNCLASSIFIED	264905, 264908
1847	87821487 (3693, 3694)	Novel Protein sim. GBank gll5059323 [gb]AAD38967.1 [AF151522] hairy and enhancer of split related-1 [Homo sapiens]	Contains protein domain (PF00010) - Helix-loop-helix DNA-binding domain	transcriptfactor	22278997, 264259, 29331824, 264909, 18108351, 263974, 22279002
1848	86789360 (3695, 3696)	Novel Protein sim. GBank gll5701854 [emb]CAB52191.1] - (AJ245417) G3b protein [Homo sapiens]		tm7	29331825, 29331826, 29331827, 265017, 264683, 264288, 264766, 264768, 21906767, 21906768, 264692, 22279002
1849	84287874 (3697, 3698)	Novel Protein sim. GBank gll4503665 [ref]NP_001989.1 [pFBLN - fibulin 2 precursor	Contains protein domain (PF00008) - EGF-like domain	ATPase_associated	56182575, 265018
1850	86689650 (3699, 3700)	Novel Protein sim. GBank gll4589582 [dbj]BAAT76813.1] - (AB023186) KIAA0969 protein [Homo sapiens]	Contains protein domain (PF00169) - PH domain	struct	60432049, 264908
1851	95419789 (3701, 3702)	Novel Protein sim. GBank gll220637 [dbj]BAA01477] - (D10627) zinc finger protein [Mus musculus]	Contains protein domain (PF00096) - Zinc finger, C2H2 type	dna_ma_bind	29331824, 35696052, 264910, 60433438, 264688, 35695917, 265020, 52644150, 65274620, 52644332

1852	95413170 (3703, 3704)	Novel Protein sim. GBank gij5174629[ref]NP_006090.1[pFIAS - protein inhibitor of activated STAT3		UNCLASSIFIED	56182575, 35696286, 22278996, 22278997, 22278999, 264490, 60432049, 264259, 29331822, 29331824, 29331825, 29331826, 60432289, 29331827, 35696052, 52644045, 265007, 264910, 60432229, 60433358, 60433438, 55812038, 65274444, 265018, 265019, 18108351, 264448, 264688, 264687, 21906765, 21906767, 21906769, 265021, 265022, 52644150, 264693, 33657109, 18108370, 18108374, 55811576, 35695855, 56182323, 60432113, 22279002, 264563
1853	91222267 (3705, 3706)	Novel Protein sim. GBank gij854065[emb]CAA58337] - (X83413) U88 [Human herpesvirus 6]		UNCLASSIFIED	264687, 264768, 52644507, 264769, 21906765, 21906767, 21906768, 22278995, 56994075, 22278999, 52644150, 264259, 264692, 29331822, 29331824, 52645128, 29331827, 33656970, 33657349, 35695763, 264508, 264906, 264628, 264907, 264629, 264909, 35696423, 35695855, 264510, 265008, 264511, 264512, 264630, 265009, 264631, 264910, 264634, 264635, 264637, 264593, 264638, 264639, 33657402, 18108385, 52646317, 52644296, 87168518, 87168559, 264602, 265017, 22279000, 265018, 264760, 264762, 264682, 264448, 264764, 264684, 264567, 264288, 264369, 264766
1854	86038152 (3707, 3708)	Novel Protein sim. GBank gij2072864 (U93569) - putative p150 [Homo sapiens]		nuclease	264592
1855	91221459 (3708, 3710)	Novel Protein sim. GBank gij4539520[emb]CAB39994.1] - (AL035424) dA22D12.1 (novel protein similar to Drosophila Kelch (Ring Canal protein, KEL) and a heterogeneous set of other types of proteins) [Homo sapiens]	Contains protein domain (PF01344) - Kelch motif	nucl_recpt	18108392, 52646365, 65274572, 56182575, 22278994, 56994075, 22278996, 35696288, 22278999, 264259, 60432049, 264908, 264510, 265007, 265008, 265009, 264595, 21906754, 87168474, 265011, 87168559, 264681, 264288, 264768, 18108359, 21906764, 21906768, 29148627, 265020, 265021, 265022, 52644150, 33657023, 33657109, 18108372, 18108374, 18108376, 35696423, 264631, 264638, 18108381, 264482
1856	94231871 (3711, 3712)	Novel Protein sim. GBank gij3954978[emb]CAA06945] - (AJ006278) acetylglucosaminyltransferase-like protein [Mus musculus]		UNCLASSIFIED	56994075, 264259, 29331828, 264511, 264910, 264758, 264693, 264637, 18108381, 83373044
1857	94324455 (3713, 3714)	Novel Protein sim. GBank gij4322670[gb]AAD16120] - (AF094508) dentin phosphoryn [Homo sapiens]		ATPase_associated	22278999, 264259, 264906, 60170831, 264448, 264686, 265020, 265022, 33657109, 60170394, 83373044

1858	87628311 (3715, 3716)	Novel Protein sim. GBank gi 4981903 gb AAD36415.1 AE00178 - (AE001788) ribosomal protein S15 [Thermotoga maritima]	Contains protein domain (PF00312) - Ribosomal protein S15	ribosomal prot	264757
1859	84407464 (3717, 3718)	Novel Protein sim. GBank gi 4240317 dbj BAA74937.1 - (AB020721) KIAA0914 protein [Homo sapiens]			22278996, 29331824, 265007, 33109954, 265019, 264368, 21906768, 29148784, 27488261, 52644332, 22279002 265019
1860	17929308 (3719, 3720)	Novel Protein sim. GBank gi 4009522 (AF095731) - connexin 31.1 [Homo sapiens]			
1861	88086370 (3721, 3722)	Novel Protein sim. GBank gi 2143637 pir l 84505 - calcium- dependent actin-binding protein - rat	Contains protein domain (PF00285) - Citrate synthase		264887, 264259, 29331822, 29331824, 29331825, 265007, 265008, 264591, 33109954, 265010, 265019, 264369, 264288, 264886, 264691, 264693, 27486264, 18108370, 18108374, 263977, 55811576, 56182323, 264639, 22279000, 22279002, 264482
1862	87372923 (3723, 3724)	Novel Protein sim. GBank gi 125493 sp P07313 KMLC_RABIT - MYOSIN LIGHT CHAIN KINASE, SKELETAL MUSCLE (MLCK)	Contains protein domain (PF00069) - Eukaryotic protein kinase domain	kinase	35696286, 264259, 87168474, 264369, 21906766, 264558, 264563
1863	85775037 (3725, 3726)	Novel Protein sim. GBank gi 3820909 emb CAA08299 - (AJ010642) Dof protein [Drosophila melanogaster]		UNCLASSIFIED	264601, 264766, 29148627, 29148629, 264692, 264629, 264635
1864	85547832 (3727, 3728)	Novel Protein sim. GBank gi 4322263 gb AAD15985 - (AF077738) metalloproteinase CPX-1 [Mus musculus]	Contains protein domain (PF00754) - F5/8 type C domain	synthase	22278999, 264259, 264907, 265018, 18108370, 264634, 264635, 264555, 264556, 264638, 18108387
1865	87740827 (3729, 3730)	Novel Protein sim. GBank gi 2495727 sp Q93073 Y256_HUMAN - HYPOTHETICAL PROTEIN KIAA0256			22278999, 264490, 29331822, 66714117, 66712502, 265006, 265007, 265008, 265009, 264591, 60433438, 265010, 265019, 264760, 264448, 264768, 29148627, 29148629, 265020, 265022, 18108385, 60432113
1866	87268816 (3731, 3732)	Novel Protein sim. GBank gi 5282617 emb CAB45748.1 - (AL080157) hypothetical protein [Homo sapiens]		kinase	18108374, 264769, 18108377, 21906765, 21906766, 35696423, 56182575, 21908769, 29148629, 35696286, 35695917, 265021, 264510, 264511, 264512, 264534, 264535, 60170831, 52644150, 264555, 264691, 264259, 264556, 264692, 264557, 33657023, 60433356, 29331822, 264559, 264595, 29331824, 18108385, 21908754, 33657182, 29331827, 35696052, 33656970, 87168518, 265017, 60431602, 22279000, 264508, 264509, 18108351, 264907, 264682, 264567, 18108372, 264765, 264486
1867	84579159 (3733, 3734)	Novel Protein sim. GBank gi 3859930 (AF076096) - forkhead/winged helix-like transcription factor 7 [Homo sapiens]		UNCLASSIFIED	264094

1868	87357459 (3735, 3736)	Novel Protein sim. GBank gi 3881525 emb CAA93884 - (Z70038) cDNA EST EMBL:D32579 comes from this gene; cDNA EST EMBL:D32554 comes from this gene; cDNA EST YK22463.5 comes from this gene; cDNA EST YK357110.5 comes from this gene [Caenorhabditis elegans]		nuclease	264489, 22278997, 22278999, 29331825, 29331826, 265008, 265009, 33657402, 87168474, 18108351, 21906765, 21906768, 21906769, 265020, 265021, 60170615, 27482684, 264628, 18108374, 264631, 18108385, 87168518, 22279000, 22279002, 264566, 264567
1869	86977292 (3737, 3738)	Novel Protein sim. GBank gi 4826772 ref NP_004961.1 p GFA - insulin-like growth factor binding protein, acid labile subunit	Contains protein domain (PF00560) - Leucine Rich Repeat	glycoprotein	264508, 264509, 264906, 264908, 264909, 264910, 264591, 264600, 18108351, 264683, 264766, 264769, 35695855, 264634, 264558, 264639, 18108385, 264563, 264486
1870	95349488 (3739, 3740)	Novel Protein sim. GBank gi 1869859 emb CAB06722 - (Z86089) very large tegument protein [human herpesvirus 2]		UNCLASSIFIED	29331824, 60424269, 265007, 265008, 21906754, 265017, 265018, 265019, 264288, 264766, 264686, 264688, 21906768, 21906769, 35695917, 60170615, 264692, 18108388, 35695763, 35696423, 65274791, 264636, 264639, 56526486
1871	80234464 (3741, 3742)			UNCLASSIFIED	264509, 264905, 264595, 264768, 264635, 264636, 264563, 264486
1872	80235355 (3743, 3744)	Novel Protein sim. GBank gi 2460316 (AF022147) - uterus-ovary specific putative transmembrane protein [Rattus norvegicus]		protease	264510, 264594, 264565
1873	80213890 (3745, 3746)				264509, 264512, 265009, 265011, 18108351, 264687, 264691, 18108370, 18108374, 264635
1874	95351136 (3747, 3748)		Contains protein domain (PF00293) - Bacterial mutT protein	UNCLASSIFIED	264488, 35695917, 264259, 264905, 264907, 264908, 264909, 263978, 264511, 264635, 264636, 264637, 264638, 33657402, 264558, 18108385, 264600, 264604, 264764, 264567, 264766
1875	87330516 (3749, 3750)	Novel Protein sim. GBank gi 4589520 dbj BAA76782.1 - (AB023155) KIAA0938 protein [Homo sapiens]		UNCLASSIFIED	35696286, 264828, 264592, 264557, 264558
1876	87112950 (3751, 3752)	Novel Protein sim. GBank gi 263810 bbn 122920 - collagen alpha chain [Riftia pachyptila=tube worms, Peptide, 1027 aa]		UNCLASSIFIED	264259, 29331822, 60432289, 264908, 264909, 264604, 264764, 264288, 264769, 18108376, 264556, 264558, 264559, 18108385
1877	87315208 (3753, 3754)	Novel Protein sim. GBank gi 3983356 gb AAC83924.1 - (AF102545) riboflavin binding protein precursor [Scaphiopus couchii]		UNCLASSIFIED	264787, 264686, 264768, 263978, 264693, 264639, 265010, 264563, 264905, 264906, 264907

1878	95351056 (3755, 3756)	Novel Protein sim. GBank gi 4510345 gb AAD21434.1 - (AC006921) unknown protein [Arabidopsis thaliana]	Contains protein domain (PF01428) - AN1-like Zinc finger	ubiquitin	264569, 264488, 35686286, 56994075, 264259, 29331822, 29331824, 29331825, 35696052, 29331828, 29146498, 264508, 264509, 264905, 264908, 264907, 264908, 264909, 264510, 264511, 264512, 265009, 264910, 33657402, 264594, 264758, 55812038, 265011, 264602, 264760, 18108351, 264762, 264681, 264682, 264764, 264369, 264288, 264766, 264687, 264768, 264769, 21908766, 35695917, 265021, 60170615, 33657023, 264692, 264693, 33657109, 27486265, 264628, 18108370, 264629, 18108374, 35696423, 284634, 264635, 264555, 264638, 264639, 83373044, 18108385, 56526486, 87168518, 264563, 264564, 264566, 264486, 264567, 264905, 264907, 264908, 265007, 264565, 264566
1879	95310883 (3757, 3758)	Novel Protein sim. GBank gi 4929643 gb AAD34082.1 AF15184 - (AF151845) CGI-87 protein [Homo sapiens]		UNCLASSIFIED	
1880	91012978 (3759, 3760)	Novel Protein sim. GBank gi 1550785 emb CAA69283 - (Y08026) Immune associated protein 38 [Mus musculus]		UNCLASSIFIED	264766, 264691, 264692, 83373044
1881	80214949 (3761, 3762)	Novel Protein sim. GBank gi 93144 pir B40505 - hypothetical protein - suid herpesvirus 1 (strain Indiana-Funkhouser or Becker)		UNCLASSIFIED	264509, 264905, 264908, 264909, 264910, 264762, 264687, 33657023, 264632
1882	88582450 (3763, 3764)	Novel Protein sim. GBank gi 2384956 (AF022985) - No definition line found [Caenorhabditis elegans]			264908, 21906766, 18108370, 263974, 87168518
1883	94216817 (3765, 3766)	Novel Protein sim. GBank gi 1351218 sp P47226 TES2_MOUSE - TESTIN 2 (TES2) [CONTAINS: TESTIN 1 (TES1)]	Contains protein domain (PF00412) - homeobox LIM domain containing proteins	homeobox	264908, 264910, 87168559, 21906766, 264636

1884	95310885 (3767, 3768)	Novel Protein sim. GBank gi 4929643 gb AAD34082.1 AF15184 - (AF151845) CGI-87 protein (Homo sapiens)		UNCLASSIFIED	264488, 18108394, 56181686, 22278998, 60432049, 264259, 29331822, 29331824, 29331825, 66714117, 29331827, 35696052, 264508, 264509, 264905, 264906, 264907, 264908, 264909, 56182435, 264510, 264511, 265007, 264512, 265009, 264910, 264592, 264593, 33657402, 55812038, 264758, 55811388, 265010, 265011, 87168559, 264600, 265017, 264604, 265019, 264605, 264760, 55811150, 264761, 264682, 264763, 264683, 264764, 264288, 264369, 264765, 264686, 264768, 264769, 29148784, 35695917, 264690, 264691, 33657023, 264692, 264693, 33657109, 18108370, 264628, 60431528, 264629, 263973, 18108374, 55810764, 55811576, 35696423, 35695855, 264631, 264634, 60431850, 264637, 264638, 56182323, 264639, 18108382, 83373044, 18108385, 60432113, 22279002, 264563, 264564, 264565, 264566, 264486, 264567
1885	87644280 (3769, 3770)	Novel Protein sim. GBank gi 2507155 sp P37370 VRP1_YEAST - VERPROLIN		UNCLASSIFIED	56182575, 264259, 264905, 264909, 265008, 264596, 264766, 265020, 264628, 60431528, 264634, 56526486, 264080, 264563
1886	86674062 (3771, 3772)	Novel Protein sim. GBank gi 2854158 gb AAC02577.1 - (AF045641) No definition line found [Caenorhabditis elegans]			22278998, 22278999, 60432049, 264910, 265018, 264766, 21906768, 29148629, 264690, 264693, 264628, 264555, 264488
1887	94138139 (3773, 3774)	Novel Protein sim. GBank gi 5174421 ref NP_006023.1 pCPNE - copine VI (neuronal)	Contains protein domain (PF00188) - C2 domain	ATPase-associated	29331822, 29331824, 29331825, 29331826, 29331827, 264906, 265007, 264681, 264768, 29148627, 264693, 18108364, 35696423, 65274791, 35695855, 264632, 56182323, 264639, 264563
1888	87822804 (3775, 3776)	Novel Protein sim. GBank gi 3319931 emb CAB10841 - (Z98046) dJ1409.2 (Melanoma-Associated Antigen MAGE LIKE) [Homo sapiens]	Contains protein domain (PF01454) - MAGE family		263978
1889	91255783 (3777, 3778)	Novel Protein sim. GBank gi 1083308 pir A56559 - enhancer-trap-locus-1 protein - mouse (fragment)	Contains protein domain (PF00176) - SNF2 and others N-terminal domain	helicase	264906, 55812038, 264758, 265010, 265018, 265019, 18108351, 264288, 21906765, 21906768, 21906769, 265021, 33657023, 33657109, 56182323, 83373044, 18108385, 22279000, 22279002
1890	87626705 (3779, 3780)	Novel Protein sim. GBank gi 4240195 dbj BAA74876.1 - (AB020660) KIAA0853 protein [Homo sapiens]		UNCLASSIFIED	18108398, 29147620, 264907, 265009, 264600, 265018, 18108351, 264288, 264689, 21906765, 21906768, 21906769, 264691, 264692, 264693, 264628, 18108370, 264636, 264556, 264404

1891	87013895 (3781, 3782)			UNCLASSIFIED	264686, 264768, 264687, 264692, 264693, 29331822, 29331824, 264508, 264905, 264906, 18108370, 264628, 264907, 264908, 264909, 18108378, 265007, 265008, 264910, 264632, 264591, 264639, 264596, 18108384, 265010, 265011, 264601, 264605, 264563, 264369
1892	87642825 (3783, 3784)	Novel Protein sim. GBank gl 5689535 dbj BAA83051.1 - (AB029022) KIAA1099 protein [Homo sapiens]	Contains protein domain (PF01412) - Putative GTP-ase activating protein, for Arf	struct	22278995, 264509, 87168559, 18108351, 264448, 264682, 265020, 264693, 18108374, 22279000
1893	86533826 (3785, 3786)			laminin	264569, 65274572, 22278997, 22278999, 264259, 29331822, 29331824, 66714117, 29331826, 264906, 265008, 265009, 264592, 265018, 264681, 264448, 264683, 18108354, 264369, 264684, 264685, 264766, 264687, 264689, 21906768, 265020, 265022, 60170615, 52644150, 264690, 264691, 264692, 33657023, 264693, 33657109, 264628, 18108374, 35695855, 264630, 264632, 264634, 264557, 264558, 60170394, 18108381, 18108385, 22279000
1894	86989120 (3787, 3788)				264508, 264905, 264906, 264907, 264594, 264684, 264690, 264692, 264630, 264635, 264638, 264639, 264583
1895	87631891 (3789, 3790)	Novel Protein sim. GBank gl 5262574 emb CAB45729.1 - (AL080133) hypothetical protein [Homo sapiens]	Contains protein domain (PF00435) - Spectrin repeat		56182575, 264259, 60432289, 29331826, 264107, 264905, 264908, 264910, 60170831, 264758, 265010, 265018, 264448, 264288, 264768, 33657109, 264628, 55810764, 18108379, 264634, 56182323, 56526486
1896	85673555 (3791, 3792)		Contains protein domain (PF00627) - UBA domain	UNCLASSIFIED	264907, 265008, 264682, 264686, 21906768, 264629, 264631, 264634, 264555
1897	80565569 (3793, 3794)	Novel Protein sim. GBank gl 728836 sp P39193 ALU6_HUMAN - IIII ALU SUBFAMILY SP WARNING ENTRY IIII		cadherin	264259
1898	87617637 (3795, 3796)	Novel Protein sim. GBank gl 127560 sp P23249 MV10_MOUSE - PROTEIN MOV-10		helicase	22278996, 22278998, 22278999, 29331824, 29331825, 60432289, 29331827, 35696052, 29331828, 265008, 265019, 264681, 264682, 264448, 264369, 52644229, 21906765, 21906766, 21906768, 21906769, 60170615, 55810784, 22279000
1899	86673097 (3797, 3798)	Novel Protein sim. GBank gl 2909819 (AF031548) - erythrocyte membrane glycoprotein Rh50 [Homo sapiens]	Contains protein domain (PF00909) - Ammonium Transporter Family	glycoprotein	264259, 264508, 264909, 60432229, 264769, 21906765, 21906769
1900	87641858 (3799, 3800)	Novel Protein sim. GBank gl 4102881 (AF017250) - vitellogenin precursor [Oreochromis aureus]		UNCLASSIFIED	264683

1901	95186647 (3801, 3802)	Novel Protein sim. GBank gi 585959 sp P38378 S61A_RAT PROTEIN TRANSPORT PROTEIN SEC61 ALPHA SUBUNIT	Contains protein domain (PF00242) - DNA polymerase (viral) N-terminal domain	-transport	264488, 52644507, 52645156, 18108396, 52646365, 52646842, 18108397, 56182575, 22278994, 22278995, 56994075, 35696286, 22278997, 22278998, 264490, 60432049, 264259, 29331822, 52645080, 29331824, 29331825, 66714117, 29331826, 60432289, 29331827, 29331828, 35696052, 33656970, 29146498, 264906, 264907, 29331830, 264908, 52644045, 264909, 284112, 265006, 264512, 265008, 264910, 265009, 60170831, 60432229, 60433356, 33657402, 60433438, 55812038, 264758, 33109854, 21908754, 33657084, 52644296, 87168474, 265010, 285011, 87168559, 265017, 265018, 265019, 18108351, 264448, 264288, 264688, 52644229, 21908765, 21908766, 21908767, 21908769, 55811957, 35695917, 265020, 265021, 52644150, 18108362, 33657023, 264693, 263967, 33657109, 33657182, 27486264, 33657349, 35695763, 18108370, 18108376, 55811576, 35696423, 35695855, 60431850, 264636, 263981, 52644332, 60170394, 83373044, 18108385, 87168518, 60432113, 264564 264107, 263976
1902	80202013 (3803, 3804)	Novel Protein sim. GBank gi 4426613 gb AAD20451 - (AF098798) SLM-1 [Mus musculus]		dna_rna_bind	
1903	87778554 (3805, 3806)	Novel Protein sim. GBank gi 3747107 (AF095741) - unknown [Rattus norvegicus]		UNCLASSIFIED	264259, 29331825, 29331827, 264508, 264907, 265008, 60170831, 60433356, 60433438, 264759, 21908754, 264448, 264288, 265021, 265022, 33657023, 264693, 55811576, 264555, 264556, 22279000
1904	80434213 (3807, 3808)	Novel Protein sim. GBank gi 1352911 sp P47147 YJ80_YEAST - HYPOTHETICAL 80.2 KD PROTEIN IN CPA2-NNF1 INTERGENIC REGION		struct	264509, 264805, 264906, 264907, 264908, 265007, 264910, 264688, 264768, 264687, 264769, 264693, 264628, 18108374, 264634, 264636, 264637, 264566
1905	95351140 (3809, 3810)	Novel Protein sim. GBank gi 3043714 dbj BAA25521 - (AB011187) KIAA0595 protein [Homo sapiens]	Contains protein domain (PF00293) - Bacterial mutT protein		264488, 264768, 264769, 264689, 29148629, 35695917, 35696286, 264259, 264692, 18108362, 33657023, 29331824, 33657109, 29146499, 264508, 264509, 264905, 264906, 264907, 66712502, 264908, 264909, 35698423, 35698555, 264510, 264511, 264512, 264910, 264634, 264635, 264637, 264638, 33657402, 264758, 85658542, 264602, 264760, 264761, 264482, 264563, 264762, 264483, 264764, 264566, 264288, 264766
1906	12763822 (3811, 3812)			UNCLASSIFIED	264637

1807	9531144 (3813, 3814)	Novel Protein sim. GBank gi 4929585 gb AAD34053.1 AF15181 - (AF151816) CGI-58 protein [Homo sapiens]	Contains protein domain (PF00561) - alpha/beta hydrolase fold	hydrolase	65274572, 22278996, 35696286, 22278998, 22278999, 264259, 60432049, 29331822, 29331825, 60424269, 29331828, 35696052, 264593, 60433356, 21906754, 55811386, 85658542, 87168559, 265018, 264681, 264682, 264684, 264288, 21906765, 21906766, 21908788, 285020, 265022, 264680, 52644150, 264692, 33657023, 264693, 33657108, 35695855, 264636, 264638, 60432113
1808	95313641 (3815, 3816)	Novel Protein sim. GBank gi 3986770 (AF109906) - NG22 [Mus musculus]		UNCLASSIFIED	264488, 65274572, 56182575, 56181686, 22278995, 22278996, 22278997, 22278998, 22278999, 60432049, 264259, 29331822, 60432289, 29331826, 29331827, 29331828, 29146499, 264905, 264906, 264907, 264908, 66712502, 264909, 56182435, 264510, 264511, 265008, 264910, 60170831, 264592, 60433356, 33657402, 264594, 60433436, 264596, 55812038, 33109954, 52646317, 265011, 265017, 264604, 265018, 265019, 264605, 55811150, 264681, 264448, 264288, 264686, 264688, 264769, 21906765, 21906766, 21906767, 21906768, 21906769, 55811957, 29148629, 35695917, 265020, 265022, 264691, 264692, 18108364, 65274620, 33657109, 33657349, 35695763, 18108374, 263978, 55810764, 55811576, 35696423, 65274791, 264631, 264632, 264556, 264557, 60170394, 56182323, 83373044, 18108385, 60432113, 22279000, 22279002, 264566, 264486
1809	85514505 (3817, 3818)	Novel Protein sim. GBank gi 2224653 db BAA20813 - (AB002354) KIAA0356 [Homo sapiens]		UNCLASSIFIED	264259, 264508, 264905, 264906, 264907, 264908, 264511, 264910, 264593, 264758, 264764, 264766, 18108370, 264634, 264637, 264486
1910	84216821 (3819, 3820)	Novel Protein sim. GBank gi 1351218 sp P47226 TES2_MOUSE - TESTIN 2 (TES2) [CONTAINS: TESTIN 1 (TES1)]	Contains protein domain (PF00412) - LIM domain containing proteins	homeobox	35696286, 22278996, 22278999, 35696052, 264509, 264905, 264906, 264907, 264908, 264909, 264511, 265007, 264512, 264910, 264758, 265011, 264601, 264602, 264604, 264605, 264761, 264764, 264288, 264768, 264768, 264687, 264769, 35695917, 265021, 52644150, 264692, 264628, 18108370, 264629, 18108372, 18108374, 35695855, 264631, 264634, 264635, 264636, 264637, 264638, 18108385, 264565, 264566, 264486

1911	91725345 (3821, 3822)	Novel Protein sim. GBank gi 4808339 gb AAD30184.1 AC006530) hypothetical protein [Homo sapiens]	Contains protein domain (PF01119) - DNA mismatch repair protein	nuclease	18108394, 56182575, 56182181, 29331826, 29331827, 33656970, 264908, 265007, 264591, 55812038, 87168559, 264448, 264369, 21906765, 21906768, 265022, 264691, 264693, 18108365, 55811576, 264556, 18108365, 18108388
1912	95413519 (3823, 3824)	Novel Protein sim. GBank gi 5689439 dbj BAA83003.1 - (AB028974) KIAA1051 protein [Homo sapiens]	Contains protein domain (PF00098) - Zinc finger, CCHC class	UNCLASSIFIED	18108397, 56182575, 56181686, 22278994, 22278995, 56994075, 22278996, 22278999, 264259, 29331822, 29331824, 56182181, 29331825, 66714117, 35698052, 264905, 264906, 264907, 264908, 52644045, 56182435, 265007, 265008, 264910, 265009, 264591, 264596, 65274444, 55811386, 87168474, 265011, 87168559, 265018, 265019, 264760, 18108351, 264681, 264369, 264684, 264288, 264688, 264768, 21908765, 21908766, 21906767, 21908768, 21906769, 55811957, 265020, 265021, 265022, 60170615, 264692, 33657023, 264693, 18108376, 55811576, 35698423, 65274791, 264637, 56182323, 83373044, 56526486, 22278002, 264563, 264566
1913	85305548 (3825, 3826)	Novel Protein sim. GBank gi 5032245 ref NP_005665.1 pZNF2 - zinc finger protein (C2H2) homologous to mouse MOK-2			56182575, 22278994, 22278995, 56994075, 22278996, 22278998, 22278999, 29331826, 29331827, 265006, 55812038, 265010, 265017, 265018, 265019, 264681, 18108351, 264683, 264764, 264369, 264288, 264685, 264686, 264769, 21906765, 21906766, 21906768, 21906769, 55811957, 265020, 265022, 264691, 55811576, 264634, 264635, 264638, 56182323, 83373044, 18108385
1914	83423982 (3827, 3828)	Novel Protein sim. GBank gi 4589604 dbj BAA76824.1 - (AB023197) KIAA0980 protein [Homo sapiens]	Contains protein domain (PF00036) - EF hand	struct	56182575, 29331824, 35696052, 264908, 264908, 264628, 264909, 264592, 264758, 87168559, 18108351, 18108354, 264684, 264686, 33657023, 264693, 264628, 264631, 264632, 264634, 264635, 264639
1915	95340459 (3829, 3830)	Novel Protein sim. GBank gi 5689415 dbj BAA82991.1 - (AB028862) KIAA1039 protein [Homo sapiens]		UNCLASSIFIED	264259, 29331824, 29331826, 29331827, 264508, 264909, 265009, 265017, 265019, 264768, 264769, 264689, 264628, 264635, 264637, 264639, 83373044, 264565
1916	79640761 (3831, 3832)				264693, 264639

1917	87821680 (3833, 3834)	Novel Protein sim. GBank gi 5689391 dbj BAA82979.1 - (AB028950) KIAA1027 protein [Homo sapiens]		struct	264769, 264689, 21906765, 21906768, 22278996, 264259, 264691, 264693, 29331824, 29331825, 29331826, 29331828, 264805, 264906, 264628, 264907, 264908, 264909, 264510, 264630, 264910, 264634, 264808, 264636, 264637, 264638, 263981, 264639, 264758, 18108385, 21906754, 265011, 264604, 264583, 18108351, 264762, 264763, 264566, 264764, 264766
1918	95302795 (3835, 3836)	Novel Protein sim. GBank gi 5281517 gb AAD41524.1 AF15483 - (AF154831) PV-1 [Rattus norvegicus]		struct	264488, 18108392, 18108357, 21906765, 21906767, 21906768, 56182575, 21906769, 22278994, 35696286, 35695917, 22278996, 22278997, 265021, 265022, 264534, 264690, 264691, 264692, 33657023, 264693, 29331824, 29331825, 33657108, 29331826, 52645129, 35696052, 29331828, 27486262, 27486284, 35695763, 264508, 264905, 264509, 264908, 264628, 264907, 18108370, 264908, 264629, 264908, 18108372, 18108374, 263978, 35696423, 35695855, 264510, 264511, 265006, 265007, 264512, 265008, 264631, 265009, 264910, 264634, 264635, 264555, 264636, 264556, 264637, 264557, 264593, 264638, 264594, 60170394, 264595, 264559, 264596, 83373044, 264758, 52646317, 18108385, 52644296, 56526486, 87188518, 265010, 265011, 87168559, 264600, 264601, 264602, 265017, 264603, 264604, 265018, 264605, 264760, 264761, 264482, 264584, 18108351, 264762, 264682, 264565, 264448, 264764, 264566, 264488, 264567, 264369, 264288, 264766, 264487, 264685
1919	94143847 (3837, 3838)	Novel Protein sim. GBank gi 3878584 emb CAB01237 - (Z77687) cDNA EST EMBL:C08125 comes from this gene; cDNA EST EMBL:C08753 comes from this gene [Caenorhabditis elegans]		oxidase	22278997, 29331822, 265007, 60170831, 60432229, 60433438, 264448, 264682, 264288, 55811857, 33657023, 33657109, 65274791, 56182323, 22279002, 264510, 264511, 264512, 264566
1920	91229853 (3839, 3840)	Novel Protein sim. GBank gi 1809231 AC000115 - coded for by human cDNAs R76043 (NID:g850725), R65857 (NID:g838495) and H12868 (NID:g877688) [Homo sapiens]		UNCLASSIFIED	
1921	78555226 (3841, 3842)	Novel Protein sim. GBank gi 450997 gb AAD24571.1 AF12108 - (AF121081) cAMP inducible 2 protein [Mus musculus]		UNCLASSIFIED	264693

1922	87641863 (3843, 3844)	Novel Protein sim. GBank gi138595 sp P02845 VT2_CHICK - VITELLOGENIN II PRECURSOR (MAJOR VITELLOGENIN) [CONTAINS: LIPOVITELLIN I (LVII); PHOSVITIN (PV); LIPOVITELLIN II (LVII); YGP40]		UNCLASSIFIED	264686, 264688, 264490, 18108370, 264909, 18108374, 265008, 264557, 264564, 18108351
1923	84323869 (3845, 3846)	Novel Protein sim. GBank gi119110 sp P03211 EBN1_EBV - EBNA-1 NUCLEAR PROTEIN		UNCLASSIFIED	264488, 264489, 22278995, 264094, 264259, 35898052, 264509, 284905, 264908, 264907, 264908, 66712502, 264909, 264511, 264512, 265007, 264910, 265009, 264591, 264592, 264593, 264594, 264595, 264758, 264598, 264759, 265011, 265017, 265018, 265019, 5581150, 264681, 264762, 264448, 264764, 284288, 264369, 264766, 264767, 264686, 264687, 264768, 264769, 56181562, 264689, 21906766, 264691, 33657023, 264693, 65274820, 33657109, 18108370, 264628, 264629, 35696423, 264630, 264631, 264632, 264634, 264555, 264636, 264637, 264638, 264639, 264558, 83373044, 87168518, 264563, 264564, 264565, 264566, 264567, 29331826, 264908, 264909, 264595, 265017, 285018, 265019, 285021, 264691, 264693, 264637, 18108385, 264555
1924	87338925 (3847, 3848)	Novel Protein sim. GBank gi138765 emb CAA96657 - (Z72511) possible zinc finger protein; cDNA EST EMBL:M89115 comes from this gene; cDNA EST EMBL:D71533 comes from this gene; cDNA EST EMBL:D72314 comes from this gene; cDNA EST EMBL:D75184 comes from this gene; cDNA EST [EMBL:C1...]	Contains protein domain (PF000097) - Zinc finger, C3HC4 type (RING finger)		
1925	87628338 (3849, 3850)	Novel Protein sim. GBank gi14981803 gb AAD36415.1 AE001788 - (AE001788) ribosomal protein S15 [Thermotoga maritima]	Contains protein domain (PF00312) - Ribosomal protein S15	ribosomalprot	22278995, 22278996, 22278997, 264259, 29331824, 66714117, 29146489, 264909, 52644045, 265008, 265009, 264758, 265011, 265017, 264605, 264448, 264288, 264692, 33657109, 18108374, 60170394
1926	88084739 (3851, 3852)	Novel Protein sim. GBank gi12246532 (U93872) - ORF 73, contains large complex repeat CR 73 [Kaposi's sarcoma- associated herpesvirus]		struct	264905, 264906, 264907, 264910, 264593, 265018, 264760, 264764, 264288, 264692, 264693, 263978, 264631, 264634, 264637, 264563
1927	85654857 (3853, 3854)	Novel Protein sim. GBank gi13043632 dbj BAA25480 - (AB011126) KIAA0554 protein [Homo sapiens]			264689, 264631
1928	87798054 (3855, 3856)	Novel Protein sim. GBank gi1165376 dbj BAA13377 - (D87433) KIAA0246 [Homo sapiens]	Contains protein domain (PF00193) - Extracellular link domain	Inf	264488, 264259, 265017, 265021, 264692
1929	86997238 (3857, 3858)	Novel Protein sim. GBank gi15001993 gb AAD37247.1 AF13432 - (AF13432) chimeric AFGP/hypsinogen-like serine protease precursor [Dissostichus mawsoni]		UNCLASSIFIED	264508, 264591, 33657402, 265017, 264768, 264632, 264556, 264639

1930	87889128 (3859, 3860)	Novel Protein sim. GBank gi 1709230 sp P52963 NBL4_MOUSE - NBL4 PROTEIN		phosphatase	3569286, 29331828, 264905, 264907, 264908, 264909, 264511, 264910, 284758, 284601, 265017, 265019, 264605, 284760, 264764, 264766, 264686, 264769, 265022, 35698423, 264638, 60432113
1931	87797279 (3861, 3862)	Novel Protein sim. GBank gi 404634 (U01840) - serine/threonine kinase [Mus musculus]	Contains protein domain (PF00069) - Eukaryotic protein kinase domain	Kinase	264906, 264908, 60432229, 264758, 264764, 264288, 265020, 264692, 264694, 264637, 264684, 264691, 264635
1932	15030972 (3863, 3864)			UNCLASSIFIED	264595
1933	11613668 (3865, 3866)	Novel Protein sim. GBank gi 4115748 db BAA36494 - (AB022023) nonmuscle myosin heavy chain B [Bos taurus]		struct	56182575, 56182435, 284510, 264757, 264758, 55812038, 55811386, 265018, 55811150, 21906765, 264691, 264631, 264635, 264637
1934	84426360 (3867, 3868)			UNCLASSIFIED	264686, 265011, 264511, 264905, 18108351, 264564, 264681, 264259, 18108370, 264566, 264764, 264369, 264595
1935	87752511 (3869, 3870)			UNCLASSIFIED	60432289, 265007, 265010, 265011, 265019, 33657109, 18108374
1936	95414338 (3871, 3872)	Novel Protein sim. GBank gi 4827040 ref NP_005110.1 pTRAP - thyroid hormone receptor-associated protein, 150 kDa subunit			
1937	94847141 (3873, 3874)	Novel Protein sim. GBank gi 543187 pir S37771 - ankyrin, erythrocyte - mouse	Contains protein domain (PF00023) - Ank repeat	kinase	85558542, 21906767, 35695917, 60170615, 264693, 33657109
1938	87403277 (3875, 3876)	Novel Protein sim. GBank gi 4544431 gb AAD22340.1 AC008955 - hypothetical protein [Arabidopsis thaliana]	Contains protein domain (PF00888) - Cullin family	collagen	264488, 29146498, 264905, 264559
1939	91004978 (3877, 3878)	Novel Protein sim. GBank gi 500859 db BAA03210 - (D14168) 50kDa lectin [Bombayx mori]		UNCLASSIFIED	65274572, 22278999, 60432289, 56182435, 60433356, 265017, 21906765, 21906766, 21906768, 55811957, 27486264, 35696423, 60432113, 264564
1940	87348810 (3879, 3880)	Novel Protein sim. GBank gi 1946300 emb CAA73132 - (Y12529) hypothetical protein [Silene latifolia]	Contains protein domain (PF00560) - Leucine Rich Repeat	struct	264488, 29331822, 264448, 264683, 264288, 265020, 33657023, 284631
1941	94147177 (3881, 3882)	Novel Protein sim. GBank gi 4206386 (AF060570) - rig-1 protein [Mus musculus]		UNCLASSIFIED	56994075, 22278998, 264259, 29331824, 29331827, 264905, 265008, 33657084, 265017, 265018, 264288, 264687, 21906765, 21906766, 21906767, 265020, 52644150, 27486264, 83373044, 18108387, 60432113, 22279002, 264565
1942	87641870 (3883, 3884)	Novel Protein sim. GBank gi 4927204 gb AAD33049.1 AF13391 - (AF133911) ARL-6 interacting protein-4 [Mus musculus]		UNCLASSIFIED	264488, 18108398, 29331825, 27486261, 264509, 18108370, 18108374, 264482
1943	94325288 (3885, 3886)	Novel Protein sim. GBank gi 3122852 sp O15736 TIPO_DICD1 - TIPO PROTEIN	Contains protein domain (PF00400) - WD domain, G-beta repeat	kinase	22278998, 29331822, 29331827, 35696052, 264511, 265009, 264592, 60432229, 265017, 265018, 265019, 264684, 264692, 33657109, 65274791, 264638

1944	94232958 (3887, 3888)	Novel Protein sim. GBank gij1799570[dbj BAA13432] - (D87671) TIP120 [Rattus norvegicus]		UNCLASSIFIED	65274572, 22278994, 22278995, 22278996, 22278998, 22278999, 264259, 52645080, 29331824, 29331826, 29331827, 66712502, 56182435, 264512, 264910, 60170831, 60432229, 60433356, 33657402, 60433438, 264596, 33109954, 21908754, 87168474, 87168559, 265017, 265018, 265019, 18108351, 264369, 264686, 264768, 21908765, 21908766, 21908767, 21908769, 35695917, 265020, 265021, 60170615, 264692, 33657023, 18108370, 18108374, 35696423, 35695855, 264634, 60170394, 264639, 83373044, 18108385, 56528486, 87168518, 60432113, 22279000, 264563
1945	87641872 (3889, 3890)	Novel Protein sim. GBank gij4927204[gb AAD33049.1 AF13391] ARL-6 interacting protein-4 [Mus musculus]		UNCLASSIFIED	264488, 22278996, 264510, 264511, 18108351, 264683, 264486, 264567
1946	87443960 (3891, 3892)	Novel Protein sim. GBank gij2498104[sp Q27969 AD50_BOVIN - ADRENAL MEDULLA 50 KD PROTEIN -		UNCLASSIFIED	60432289, 29331827, 35696052, 265007, 265008, 60433356, 60433438, 264369, 56181562, 21908767, 52644150, 264693, 27486264, 264637, 87168518, 264563
1947	86438862 (3893, 3894)	Novel Protein sim. GBank gij3914801[sp O54888 PPA2_RAT - DNA-DIRECTED RNA POLYMERASE I 135 KD POLYPEPTIDE (RNA POLYMERASE I SUBUNIT 2) (RPA135) (RNA POLYMERASE I 127 KD SUBUNIT)		mapolymerase	22278998, 264905, 264906, 264908, 264909, 264512, 264758, 264762, 264682, 264683, 264764, 264288, 264768, 264688, 21906768, 264693, 18108374, 35695855, 264635, 264637, 264638, 18108385, 22279002
1948	95199174 (3895, 3896)	Novel Protein sim. GBank gij5420387[emb CAB46679.1 - (AJ243459) proteophosphoglycan [Leishmania major]		struct	264909, 60170831, 264591, 264594, 235010, 265011, 264764, 264369, 264689, 264631, 264638
1949	7640129 (3897, 3898)				264369
1950	87788531 (3899, 3900)	Novel Protein sim. GBank gij3876766[emb CAA93466.1 - (Z69637) predicted using GeneFinder: Similarity to E.coli hypothetical protein YCAC (SW:YCAC_ECOLI) [Caenorhabditis elegans]	Contains protein domain (PF00857) - Isochorismalase family	UNCLASSIFIED	264488, 264768, 264688, 264689, 264259, 29331822, 33657109, 29331828, 264103, 264509, 18108370, 35695855, 264510, 265008, 265009, 33657402, 18108385, 265018, 264563, 55811150, 18108351, 264369, 264288, 18108354
1951	86988253 (3901, 3902)	Novel Protein sim. GBank gij2626753[dbj BAA23424 - (AB008782) sulfate transporter [Arabidopsis thaliana]	Contains protein domain (PF00916) - Sulfate transporter family	transport	56182575, 22278997, 52645080, 29331824, 29331825, 29331827, 55812038, 52646317, 265018, 265019, 264369, 21906765, 21906767, 55811957, 265020, 265021, 33657023, 264693, 35695763, 56182323, 22279002
1952	87069775 (3903, 3904)	Novel Protein sim. GBank gij4928633[gb AAD34077.1 AF15184 - (AF151840) CGI-82 protein [Homo sapiens]	Contains protein domain (PF00106) - short chain dehydrogenase	reductase	264591, 264593, 264594, 264595, 264555, 264556, 264557, 264558, 264565

1953	20470371 (3905, 3906)	Novel Protein sim. GBank gil1168715sp P31721 C1QB: RAY - COMPLEMENT C1Q SUBCOMPONENT, B CHAIN PRECURSOR	Contains protein domain (PF00386) - complement C1q domain		264259, 264558
1954	91226025 (3907, 3908)	Novel Protein sim. GBank gil14240271 dbj BAA74914.1 - (AB020698) KIAA0891 protein [Homo sapiens]	Contains protein domain (PF00443) - Ubiquitin carboxyl-terminal hydrolase family 2	ubiquitin	264488, 263994, 18108394, 35696286, 22278998, 29331822, 66714117, 29331826, 29331827, 264508, 264509, 264905, 264906, 264907, 264908, 264909, 264510, 265008, 265007, 265008, 264910, 265009, 60170831, 60432229, 265011, 265017, 264603, 264604, 265019, 18108351, 264685, 264766, 264769, 35695917, 265020, 265021, 264691, 33657023, 264692, 33657109, 264628, 18108374, 35696423, 55811576, 35695855, 264630, 264635, 264636, 264555, 264556, 264638, 264557, 264639, 264558, 264559, 83373044, 18108385, 264563, 264564, 264566, 264486, 264567
1955	95308310 (3908, 3910)			UNCLASSIFIED	56182575, 56181686, 22278994, 22278999, 264259, 29331822, 56182181, 29331824, 29331825, 29331826, 29331827, 35696052, 264508, 29331830, 265008, 265009, 264591, 55812038, 87168474, 265017, 265018, 265019, 264448, 264766, 21906765, 21906766, 21906767, 55811957, 265020, 265021, 52645129, 33657109, 27486264, 33657349, 35695763, 60431528, 18108374, 55811576, 35695855, 264635, 60431850, 264639, 83373044
1956	95092121 (3911, 3912)	Novel Protein sim. GBank gil1665821 dbj BAA134071 - (D87469) Similar to D melanogaster cadherin-related tumor suppressor [Homo sapiens]	Contains protein domain (PF00028) - Cadherin domain	cadherin	264488, 56182575, 22278996, 22278999, 264259, 29331822, 29331824, 29331825, 29331827, 35696052, 29331828, 264508, 264906, 264908, 264909, 264511, 265007, 264910, 264591, 55812038, 265010, 265018, 18108351, 264768, 56181562, 264689, 21906768, 21906769, 265022, 264691, 264628, 18108374, 55810764, 55811576, 35695855, 264631, 264632, 264635, 264637, 264639, 60170394, 56182323, 83373044, 18108385, 22279000, 22279002, 264563, 264564

1957	94326510 (3913, 3914)	Novel Protein sim. GBank gi 4589674 dbj BAA76856.1 - (AB023229) KIAA1012 protein [Homo sapiens]		UNCLASSIFIED	52646842, 56182575, 22278997, 22278998, 22278999, 29331824, 68714117, 29331827, 28146498, 264593, 33657402, 33109954, 87168474, 265018, 264448, 264369, 264288, 264766, 21906766, 21908767, 21906768, 21908769, 265020, 265021, 264692, 65274620, 27486264, 33657349, 27486265, 35695855, 22279002, 264482
1958	95313902 (3915, 3916)	Novel Protein sim. GBank gi 4240227 dbj BAA74892.1 - (AB020876) KIAA0869 protein [Homo sapiens]		UNCLASSIFIED	22278998, 264092, 264094, 264259, 60432048, 29331824, 56182181, 68714117, 264107, 264109, 264909, 264511, 60170831, 60432229, 21906754, 265010, 21906769, 35695917, 265022, 65274620, 263967, 263976, 35698423, 264631, 264632, 264634, 264635, 18108385, 22279000, 22279002, 264593, 265019
1959	85701470 (3917, 3918)	Novel Protein sim. GBank gi 2281983 emb CAB10860 - (Z88056) hyppothetical protein [Schizosaccharomyces pombe]		ubiquitin	
1960	80308608 (3919, 3920)	Novel Protein sim. GBank gi 2274851 dbj BAA21515 - (D64159) 3-7 gene product [Homo sapiens]		struct	264905, 264806, 264907, 264908, 264909, 265006, 265007, 264910, 264595, 265017, 264604, 265018, 18108351, 264764, 264369, 264766, 264768, 21906765, 18108368, 284629, 18108378, 264635, 264636, 264637, 264638, 264486
1961	16292607 (3921, 3922)				264635
1962	91008385 (3923, 3924)			UNCLASSIFIED	65274572, 264592, 264593, 265019, 264691
1963	90936017 (3925, 3926)	Novel Protein sim. GBank gi 3721653 dbj BAA33581 - (AB012933) acyl-CoA synthetase 5 [Rattus norvegicus]		eph	65274572, 18108398, 35696286, 28331825, 60432289, 29331827, 264828, 265006, 265009, 60433356, 60433438, 21906754, 265020, 265021, 33657023, 33657109, 27486285, 35695855, 264555
1964	94317605 (3927, 3928)	Novel Protein sim. GBank gi 5262638 emb CAB45757.1 - (AL080169) hypothetical protein [Homo sapiens]		cadherin	264488, 264032, 264259, 264509, 264905, 264906, 264907, 264908, 264909, 264510, 264511, 265007, 265009, 264910, 264592, 264593, 264594, 264595, 264758, 264600, 264603, 264604, 264605, 264760, 264762, 264448, 264764, 264288, 264885, 264766, 264768, 264769, 21906766, 264691, 264692, 264693, 18108370, 264628, 264629, 18108374, 264630, 264631, 264634, 264636, 264637, 264638, 18108382, 83373044, 18108385, 264483, 264584, 264565, 264566, 264486, 264567
1965	94317445 (3929, 3930)	Novel Protein sim. GBank gi 4107017 dbj BAA36294 - (AB001773) PEM-5 [Ciona savignyi]	Contains protein domain (PF01428) - AN1-like Zinc finger	ubiquitin	264488, 264510, 264760, 264768, 264486

1866	94192058 (3931, 3932)	Novel Protein sim. GBank gij4929707[gb AAD34114.1 AF15187 - (AF151877) CGI-119 protein [Homo sapiens]	Contains protein domain (PF01027) - Uncharacterized protein family	glycoprotein	22278999, 264092, 264259, 29331826, 29331828, 29146498, 264595, 265011, 264448, 18108354, 264288, 264684, 264766, 264685, 264686, 265022, 264691, 264692, 18108370, 18108377, 264555, 18108381, 18108385, 264486, 264567
1867	87396123 (3933, 3934)	Novel Protein sim. GBank gij2957270 (AF044576) - phospholipase C PLC210 [Caenorhabditis elegans]	Contains protein domain (PF00388) - Phosphatidylinositol-specific phospholipase C, X domain	esterase	29331824, 265010, 265017, 264288, 21906764, 263981, 56526486
1868	88095641 (3935, 3936)	Novel Protein sim. GBank gij2564953 (AF030001) - unknown [Mus musculus]	Contains protein domain (PF00008) - EGF-like domain	oncogene	35698286, 264905, 264509, 264908, 264907, 264908, 264909, 264511, 264512, 265008, 264910, 265009, 264594, 264757, 264758, 264604, 264605, 264760, 264762, 264682, 264764, 264685, 264766, 264767, 264689, 264691, 264693, 264628, 264629, 35698423, 35695855, 264631, 264632, 264634, 264635, 264636, 264637, 18108380, 264564, 264565, 264566, 264567
1869	84328529 (3937, 3938)	Novel Protein sim. GBank gij2911274 (U20329) - spidrolin 1 [Nephila clavipes]		UNCLASSIFIED	22278995, 22278996, 35696052, 264906, 264908, 18108351, 264482
1870	80596049 (3939, 3940)	Novel Protein sim. GBank gij4050087 (AF109907) - S164 [Homo sapiens]		UNCLASSIFIED	264908, 264288, 264766, 264636
1871	94843914 (3941, 3942)	Novel Protein sim. GBank gij134208[sip P09593 SANT_PLAFV - S-ANTIGEN PROTEIN PRECURSOR		collagen	264488, 264489, 22278998, 264259, 60432049, 66714117, 29331826, 60432289, 29331827, 35696052, 264508, 264905, 264509, 264906, 264907, 264908, 264909, 264510, 264511, 264512, 264910, 264591, 264592, 60432229, 60433356, 264595, 264596, 264600, 264604, 264605, 264760, 18108351, 264448, 264764, 264288, 264766, 264768, 264769, 21906765, 33657023, 264692, 18108370, 264629, 35696423, 65274791, 35695855, 264632, 264635, 264555, 264636, 264637, 264638, 264639, 18108385, 60432113, 22279000, 264563, 264564, 264565, 264566, 264486
1872	87645444 (3943, 3944)	Novel Protein sim. GBank gij4519623[dj BAA75671.1 - (AB017616) homologous to the yeast YGR163 gene [Mus musculus]	Contains protein domain (PF01462) - Leucine rich repeat N-terminal domain		22278999, 264259, 29331822, 56182181, 60432289, 29331827, 52644045, 264909, 265006, 264511, 265008, 5264296, 265018, 265019, 264781, 264689, 21906768, 21906769, 264691, 264693, 33657109, 33657182, 264556, 52644332, 264558, 60432113
1873	86395533 (3945, 3946)			UNCLASSIFIED	29331826, 264692, 35696423, 264631, 264555, 264556, 264557, 264558, 264559
1874	80396629 (3947, 3948)	Novel Protein sim. GBank gij3309543 (AF036382) - MLL [Fugu rubripes]		UNCLASSIFIED	264682, 264764, 264563

1975	94316479 (3949, 3950)			UNCLASSIFIED	264488, 66714117, 29331826, 29331828, 56182435, 265008, 264757, 55812038, 265010, 265017, 264369, 55811957, 65274791, 35695855, 56182323, 60432113, 264259, 35696052, 265018, 265020, 265021, 33657109, 56526486
1976	95358914 (3951, 3952)			UNCLASSIFIED	264808, 264596, 265021, 264566
1977	94852864 (3953, 3954)	Novel Protein sim. GBank gil249528sp Q07782 NASU_RAT - SODIUM/SULFATE COTRANSPORTER (NA(+)/SULFATE COTRANSPORTER)		homeobox	
1978	87447645 (3955, 3956)	Novel Protein sim. GBank gil103421 pir J33471 - transcription factor NTF1 - fruit fly (<i>Drosophila</i> melanogaster) (fragment)		transcription factor	60170831, 264566
1979	87627708 (3957, 3958)	Novel Protein sim. GBank gil2244815 emb CAB10238.1 - (Z97338) hypothetical protein [Arabidopsis thaliana]		UNCLASSIFIED	29331826, 29146498, 264905, 264907, 265007, 265009, 265010, 265018, 264686, 18108359, 21906768, 35695917, 265020, 60170615, 264693, 18108368, 18108370, 264631, 264635, 264556, 264558, 18108384, 22279000, 264565
1980	86577059 (3959, 3960)	Novel Protein sim. GBank gil4759290 ref NP_004642.1 pUSP1 - Ubiquitin carboxyl- terminal hydrolase, X-linked		ubiquitin	264489
1981	87606974 (3961, 3962)	Novel Protein sim. GBank gil4406693 gb AAD20060 - (AF131849) Unknown [Homo sapiens]		UNCLASSIFIED	22278995, 22278997, 22278999, 264259, 29331825, 29331828, 29146498, 29146499, 264107, 264908, 264910, 264595, 21906754, 265010, 265017, 265018, 265019, 264448, 284286, 21906767, 33657023, 27486264, 18108370, 18108374, 18108376, 264630, 264631, 264635, 18108385, 87168518, 22279000, 264482, 264564
1982	80955367 (3963, 3964)	Novel Protein sim. GBank gil5689523 dbj BAA83045.1 - (AB029016) KIAA1093 protein [Homo sapiens]			65274572, 29331825, 35696052, 33656970, 264909, 265008, 55811386, 264760, 264686, 264691, 27486284
1983	95098688 (3965, 3966)	Novel Protein sim. GBank gil3417297 (AC002310) - Unknown gene product [Homo sapiens]	Contains protein domain (PF00096) - Zinc finger, C2H2 type	transcription factor	22278996, 35695286, 264259, 29331822, 20281099, 29331824, 60432289, 29331827, 264509, 264905, 264906, 264907, 66712502, 264908, 52644045, 264909, 264510, 264512, 264910, 265009, 264591, 264592, 60433356, 60433438, 264758, 265010, 264600, 264603, 264604, 264760, 264762, 264763, 264764, 264766, 264687, 264768, 264769, 21906765, 55811957, 35695917, 264690, 264692, 264693, 264628, 264629, 263978, 18108379, 35696423, 35695855, 20281071, 264632, 264634, 264635, 264555, 264636, 264637, 264638, 264639, 83373044, 18108385, 22279000, 22279002

1984	85760889 (3987, 3988)	Novel Protein sim. GBank gij2896895[emb]CAA17174.1]- (AL021897) fadD14 [Mycobacterium tuberculosis]		synthase	264888, 21906766, 55811957, 56994075, 265020, 265021, 22278999, 265022, 264259, 29331822, 33657182, 29146499, 264628, 18108370, 264908, 264629, 55811576, 35695855, 265006, 265007, 264591, 21906754, 33657084, 265010, 265017, 265019, 264288
1985	85636897 (3968, 3970)	Novel Protein sim. GBank gij5712131[gb]AAD47379.1[AF12049] DEM1 protein [Homo sapiens]		glycoprotein	264760, 264288, 263978, 55811576, 264637, 56182323, 18108385, 264564
1986	80200507 (3971, 3972)			UNCLASSIFIED	264488, 264629
1987	87011117 (3973, 3974)	Novel Protein sim. GBank gij4868443[gb]AAD31319.1[AF14457] Mx-interacting protein kinase PKM [Mesocricetus auratus]	Contains protein domain (PF00086) - Eukaryotic protein kinase domain		22278999, 29331830, 265007, 265018, 21906768, 33657023, 264692, 264693, 18108377, 264635, 60170394, 22279002
1988	94122108 (3975, 3976)			UNCLASSIFIED	264905, 264906, 264907, 264908, 264909, 264910, 264591, 264593, 264758, 264764, 264686, 264768, 265021, 264692, 264628, 264629, 35695855, 264630, 264635, 264636, 264637, 264638, 264639, 264483
1989	91225225 (3977, 3978)	Novel Protein sim. GBank gij2801701 (AF042379) - spindle pole body protein spc97 homolog GCP2 [Homo sapiens]		tubulin	60432049, 60432289, 52644045, 56182435, 264112, 265007, 33657402, 52844229, 21906765, 21906768, 21906769, 55811957, 33657023, 263967, 33657109, 18108370, 22279000, 22279002
1990	85698888 (3979, 3980)	Novel Protein sim. GBank gij5701727[db]BAA83074.1]- (AB024729) alpha-1,3-D-mannoside beta-1,4-N-acetylglucosaminyltransferase IV-homologue [Homo sapiens]			264508, 264757, 264764, 18108381
1991	85353114 (3981, 3982)	Novel Protein sim. GBank gij4240287[db]BAA74922.1]- (AB020708) KIAA0899 protein [Homo sapiens]	Contains protein domain (PF01602) - Adaptin N terminal region	glycoprotein	18108394, 56182575, 22278994, 35696288, 56994075, 22278997, 22278999, 29331822, 29331824, 29331825, 60432289, 29331828, 264508, 264906, 264907, 264908, 56182435, 264510, 285007, 21906754, 33109954, 87168474, 265017, 265018, 265019, 264762, 18108351, 264763, 264883, 264369, 264288, 264685, 264766, 264687, 264769, 21906765, 21906768, 21906769, 55811957, 265020, 60431528, 263974, 18108379, 35695855, 264555, 264557, 264639, 83373044, 18108394, 87168518, 60432113, 22279000, 22279002, 264564, 264486
1992	95317232 (3983, 3984)	Novel Protein sim. GBank gij2246532 (U93872) - ORF 73, contains large complex repeat CR 73 [Kaposi's sarcoma-associated herpesvirus]	Contains protein domain (PF00086) - Zinc finger, C2H2 type	struct	29331827, 264906, 264907, 264909, 265007, 264603, 264766, 264686, 264768, 21906768, 264628, 264635, 264636, 18108385, 56526486, 264566, 264567
1993	80054763 (3985, 3986)	Novel Protein sim. GBank gij2665091 (U80761) - CTG26 alternate open reading frame [Homo sapiens]		UNCLASSIFIED	264592, 35696423

1994	84329114 (3987, 3988)	Novel Protein sim. GBank gi15630077 gb AAD45822.1 AC006017 similar to ALR; similar to AAC51735 (PID:g2358287) [Homo sapiens]	Contains protein domain (PF00856) - SET domain	mapolymerase	264488, 22278997, 22278998, 22278999, 29331822, 29331824, 29331825, 29331826, 29331827, 29331828, 264905, 264907, 264908, 265008, 60432229, 33657402, 60433356, 264757, 60433438, 264758, 33109954, 265011, 265017, 265018, 265019, 264884, 264368, 264685, 264686, 264768, 21906765, 21906767, 21906768, 21906769, 265020, 264690, 18108362, 264693, 85274620, 18108370, 264635, 264555, 264558, 264557, 83373044, 36526486, 22279000, 22279002, 264564
1995	85414353 (3989, 3990)	Novel Protein sim. GBank gi4827040 ref NP_005110.1 pTRAP - thyroid hormone receptor-associated protein, 150 kDa subunit		UNCLASSIFIED	264488, 18108396, 22278994, 56994075, 22278996, 35686286, 22278997, 22278999, 264259, 29147620, 56182181, 29331824, 60432289, 29331826, 29331827, 35696052, 29146499, 264905, 264907, 66712502, 56182435, 265006, 265007, 265008, 265009, 60431735, 60433356, 33657402, 264595, 55812038, 33657084, 55811386, 85658542, 265010, 265011, 265017, 265018, 265019, 264761, 264762, 264448, 264683, 264764, 264288, 264766, 264686, 264768, 264769, 56181562, 264689, 21906765, 21906768, 21906767, 29148627, 21906768, 21906769, 29148629, 29148784, 265020, 265021, 264690, 18108361, 264693, 27486262, 27486264, 27486265, 18108370, 60431528, 18108374, 18108377, 35696423, 55811576, 85274791, 35695855, 264631, 264634, 264635, 264555, 264636, 60431850, 264557, 264558, 264559, 83373044, 20798451, 87188518, 264404, 60432113, 264567
1996	80254186 (3991, 3992)	Novel Protein sim. GBank gi1791146 emb CAA60020 - [X86028] extensin-like protein [Vigna unguiculata]		UNCLASSIFIED	264564
1997	87028423 (3993, 3994)	Novel Protein sim. GBank gi12642034 (AF034547) - protein phosphatase M130 myosin binding subunit [Ovis aries]	Contains protein domain (PF00023) - Ank repeat	phosphatase	264908, 264909, 264592, 264593
1998	85262704 (3995, 3996)	Novel Protein sim. GBank gi14589634 dbj BAA76839.1 - (AB023212) KIAA0995 protein [Homo sapiens]		UNCLASSIFIED	264113, 264685, 264555, 264567

1999	94324803 (3997, 3998)	Novel Protein sim. GBank gi 5225312 gb AAD40846.1 AF072441 calchectin binding protein cabin 1 (Homo sapiens)	Contains protein domain (PF00515) - TPR Domain	UNCLASSIFIED	18108394, 18108397, 35696286, 60424269, 29331827, 29331828, 35696052, 265006, 264512, 55811386, 265010, 265018, 265019, 55811150, 18108351, 264763, 264682, 264369, 264685, 264686, 56181562, 265020, 264691, 33657023, 264693, 33657109, 27486264, 18108370, 18108379, 35695855, 264634, 264635, 264636, 264555, 264557, 56182323, 18108382, 264559, 83373044, 60432113, 22279000, 264563, 264564, 264566
2000	95413705 (3999, 4000)	Novel Protein sim. GBank gi 723232 sp Q1015 YATA_SCHPO - HYPOTHETICAL 90.6 KD PROTEIN C1D4.10 IN CHROMOSOME 1		UNCLASSIFIED	52646365, 52646842, 22278994, 22278995, 22278996, 35696286, 22278997, 22278998, 22278999, 264259, 52645080, 29331822, 29331826, 29331827, 29331828, 35696052, 264106, 29331830, 52644045, 265007, 265008, 60170831, 264592, 264593, 33657402, 60433438, 21906754, 52644296, 265017, 265018, 265019, 264761, 264369, 264288, 52644229, 21906765, 21906766, 21906767, 21906768, 21906769, 35695917, 265020, 265021, 60170815, 52644150, 33657023, 65274620, 52645129, 27486261, 27486262, 27486264, 35695763, 35696423, 35695855, 264631, 52644332, 56182323, 60170394, 83373044, 56526486, 22279002, 264566, 264567
2001	95072534 (4001, 4002)	Novel Protein sim. GBank gi 107560 pir B38637 - Ras inhibitor (clone JC265) - human (fragment)		UNCLASSIFIED	264789, 52644229, 65274572, 21906768, 22278996, 35696286, 35695917, 265020, 22278999, 264534, 264490, 264259, 264692, 60432289, 33657109, 35696052, 264508, 264509, 18108370, 60431528, 18108374, 35696423, 65274791, 35695855, 264510, 264511, 264512, 265009, 264634, 264636, 264555, 264556, 264638, 264557, 264558, 264559, 60433438, 83373044, 264759, 18108385, 265011, 264600, 264601, 60432113, 264603, 264604, 264605, 264448, 264288, 264765
2002	80236368 (4003, 4004)	Novel Protein sim. GBank gi 729433 sp P38657 IER60_BOVIN - PROBABLE PROTEIN DISULFIDE ISOMERASE ER-60 PRECURSOR (ERP60) (58 KD MICROSOMAL PROTEIN) (P58)	Contains protein domain (PF00085) - Thioredoxin	isomerase	264907, 265006, 264910, 264603, 264692, 264629, 18108374, 264556, 264557
2003	80074449 (4005, 4006)	Novel Protein sim. GBank gi 86388 pir A27040 - neurofilament triplet M protein - chicken (fragment)		UNCLASSIFIED	264905, 264906, 264908, 264910, 264596, 265017, 18108351, 264692, 264629, 264634, 264565

2004	95317318 (4007, 4008)	Novel Protein sim. GBank gij4884249[embj]CAB43230.1]- (AL049986) hypothetical protein [Homo sapiens]	Contains protein domain (PF00076) - RNA recognition motif. (a.k.a. RRM, RBD, or RNP domain)	dna_rna_bind	52645156, 52646842, 52646365, 56182575, 22278994, 22278995, 56994075, 22278996, 3569286, 22278997, 22278998, 22278999, 60432049, 264259, 52645080, 29331824, 29331826, 29331827, 35696052, 29331828, 33659970, 29331830, 264908, 264592, 60433356, 33657402, 52646317, 21906754, 33657084, 52644296, 87168474, 87168559, 265017, 265018, 265019, 264763, 264683, 264288, 52644229, 21906765, 21906766, 21906767, 21906768, 21906769, 35695917, 265020, 265021, 265022, 52644150, 33657023, 52645129, 33657109, 33657182, 27486261, 27486262, 33657349, 27486265, 35695763, 18108374, 18108376, 18108377, 35696423, 35695855, 264631, 52644332, 264558, 18108385, 58526486, 87168518, 60432113, 264483, 264488, 264906
2005	87400864 (4009, 4010)	Novel Protein sim. GBank gij3879501[embj]CAA87795]- (Z47812) similar to ubiquitin carboxyl-terminal hydrolase; cDNA EST EMBL:D33368 comes from this gene; cDNA EST EMBL:D33965 comes from this gene; cDNA EST EMBL:D33822 comes from this gene; cDNA EST EMBL:D34547 comes from this ge...		ubiquitin	
2008	95351177 (4011, 4012)	Novel Protein sim. GBank gij4106673[embj]CAA22613]- (AL035064) queuine tRNA-ribosyltransferase [Schizosaccharomyces pombe]	Contains protein domain (PF01702) - Queuine tRNA-ribosyltransferase	UNCLASSIFIED	56182575, 56181686, 22278995, 22278996, 22278997, 22278998, 22278999, 264259, 56182181, 60424269, 66714117, 35696052, 264806, 66712502, 264809, 264510, 60433356, 85658542, 265010, 265018, 265019, 264682, 264448, 264288, 264768, 29148627, 21906769, 29148784, 35695917, 60170615, 264691, 33657023, 65274620, 33657109, 55810764, 55811576, 35695855, 87168518, 60432113, 264563, 264482
2007	94325558 (4013, 4014)	Novel Protein sim. GBank gij2682161[dbj]BAA23712]- (AB007900) HH0452 cDNA clone for KIAA0440 has a 438-bp insertion at position 1711 of the sequence of KIAA0440. [Homo sapiens]		UNCLASSIFIED	264488, 263994, 35696052, 264508, 264905, 264906, 264907, 264908, 264909, 265007, 264910, 264592, 264595, 264758, 265011, 264760, 264762, 264764, 264766, 264685, 264767, 264768, 264769, 55811957, 35695917, 265020, 264691, 264693, 264628, 264629, 65274791, 35695855, 264631, 264632, 264634, 264635, 264637, 264638, 264639, 264566
2008	85084428 (4015, 4016)	Novel Protein sim. GBank gij1550783[embj]CAA69257]- (Y07960) homeodomain protein [Mus musculus]	Contains protein domain (PF00046) - Homeobox domain	homeobox	264909, 264768, 35695855

2009	85749240 (4017, 4018)	Novel Protein sim. GBank gj3882305[dbj BAA34512.1] - (AB018335) KIAA0792 protein [Homo sapiens]		UNCLASSIFIED	22278999, 264259, 264910, 264591, 265017, 264681, 264683, 21906768, 264691, 33657182, 33657349, 264631, 87168518, 264404, 22279002, 264583
2010	85422458 (4019, 4020)	Novel Protein sim. GBank gj5262829[emb CAB45753.1] - (AL080164) hypothetical protein [Homo sapiens]	Contains protein domain (PF00057) - eph Low-density lipoprotein receptor domain class A		52844507, 52845156, 52846365, 52846842, 18108397, 65274572, 22278994, 56994075, 35698286, 22278997, 22278999, 264259, 29331822, 52645080, 29331824, 29331825, 29331826, 29331827, 29331828, 264511, 265007, 264512, 285008, 265009, 60432229, 60433358, 21906754, 52846317, 33109954, 52844296, 87168474, 87168559, 265017, 265018, 265019, 264681, 264685, 264687, 52844229, 264689, 21906765, 21906766, 21906767, 21906768, 35695917, 265020, 52844150, 264691, 264692, 33657023, 263967, 52645129, 35695763, 18108376, 35696423, 65274791, 35695855, 264631, 264634, 60431850, 264637, 264638, 52844332, 60170394, 18108385, 87168518, 22279002, 264564, 264565, 264566, 264567
2011	94328149 (4021, 4022)	Novel Protein sim. GBank gj3347953 (AF076783) - cytosolic sorting protein PACS-1a [Rattus norvegicus]		UNCLASSIFIED	56182575, 56994075, 22278999, 264259, 29331824, 29331826, 29331827, 29331828, 35698052, 264906, 66712502, 265006, 265007, 265008, 265010, 265011, 265017, 265019, 264681, 264448, 264683, 264369, 264288, 264685, 264766, 264687, 21906765, 21906767, 21906768, 21906769, 265020, 265022, 264691, 33657023, 65274620, 33657109, 264629, 264557, 264559, 83373044, 87168518, 60432113, 22279002
2012	87772137 (4023, 4024)	Novel Protein sim. GBank gj1086678 (U41020) - coded for by C. elegans cDNA yk100g4.5; coded for by C. elegans cDNA yk100g4.3; weakly similar to human SREBP-2 basic-helix-loop-helix-leucine zipper transcription factor [Caenorhabditis elegans]	Contains protein domain (PF00409) - Kinesin light chain repeat	UNCLASSIFIED	264259, 29331822, 29331824, 29331825, 29146498, 87168559, 265019, 264682, 264288, 264686, 21906764, 265020, 265022, 33657023, 264693, 33657109, 55811576, 264632, 264558, 56182323, 264639, 18108383, 18108384, 18108386, 22279000, 22279002, 264567
2013	94843842 (4025, 4026)	Novel Protein sim. GBank gj14507985[ref NP_003427.1]pZNF1 - zinc finger protein 135 (clone pHZ-17)	Contains protein domain (PF00096) - Zinc finger, C2H2 type	dna_ma_bind	18108398, 264908, 265007, 265010, 265018, 265019, 264689, 21906767, 265020, 264692
2014	87347940 (4027, 4028)	Novel Protein sim. GBank gj127720[sp P20938 MYPO_HETFR - MYELIN P0 PROTEIN PRECURSOR		UNCLASSIFIED	264488, 29331826, 264907, 264636, 264555, 264639, 264558

2015	88094922 (4029, 4030)	Novel Protein sim. GBank gij181286ipirj[S22697 - extensin - Volvox carteri (fragment)]		UNCLASSIFIED	56182375, 35696286, 264259, 35696052, 264508, 264906, 264907, 264510, 264512, 87168474, 265010, 264681, 264288, 264689, 264628, 35696423, 35695855, 264639, 264563, 264564
2016	35298641 (4031, 4032)	Novel Protein sim. GBank gij285046ipirj[S26413 - (-complex protein Tcp-10 - mouse		struct	264102, 264508, 264110, 265009, 33109954, 21906768, 265021, 33657109, 27486262, 263972, 18108374, 263976, 264555, 264564 264685, 264636
2017	79484293 (4033, 4034)	Novel Protein sim. GBank gij124735ipirjP18175 INVO_PIG - INVOLUCRIN		UNCLASSIFIED	264693
2018	79637067 (4035, 4036)	Novel Protein sim. GBank gij2143910ipirj[S68216 - phosphatase-1 glycogen-binding (GL)-chain - rat		phosphatase	264107, 264110, 264112, 265017, 263976
2019	87787900 (4037, 4038)	Novel Protein sim. GBank gij2078483 (U43200) - antifreeze glycopeptide AFGP polypeptide precursor [Boreogadus salda]		UNCLASSIFIED	264259, 264508, 264591, 265018, 264682, 264288, 264688, 22279002
2020	94674476 (4039, 4040)	Novel Protein sim. GBank gij585084ipirjQ07803 EFGM, RAT - ELONGATION FACTOR G, MITOCHONDRIAL PRECURSOR (MEF-G)			56994075, 264593, 33109954, 21906754, 21906768, 33657023, 33657109, 27486261, 87168518
2021	86718818 (4041, 4042)	Novel Protein sim. GBank gij4218005 (AC008135) - putative vicilin storage protein (globulin-like) [Arabidopsis thaliana]			264757, 264767, 60170615, 18108385
2022	95295665 (4043, 4044)	Novel Protein sim. GBank gij5410230ipirjAAD42992.1 AF07334 - (AF073344) ubiquitin specific protease 3 [Homo sapiens]	Contains protein domain (PF00442) - Ubiquitin carboxyl-terminal hydrolases family 2	ubiquitin	18108394, 22278999, 264259, 264905, 264906, 264908, 264595, 264762, 264769, 264634, 264636, 87168518, 60432113, 22279000, 264482, 264565
2023	87722976 (4045, 4046)	Novel Protein sim. GBank gij4755188ipirjAAD29055.1 AC00701 - (AC007018) unknown protein [Arabidopsis thaliana]			60433438, 265017, 264686, 264692, 264693, 264636
2024	87896443 (4047, 4048)	Novel Protein sim. GBank gij165569ipirjemb CAA69032 - (Y07752) pterophorin-S [Volvox carteri]	Contains protein domain (PF00637) - 7-fold repeat in Clathrin and VPS	UNCLASSIFIED	22278997, 264509, 264906, 264909, 55812038, 265017, 265021, 265022, 60170815, 264556
2025	87858863 (4049, 4050)	Novel Protein sim. GBank gij165569ipirjemb CAA69032 - (Y07752) pterophorin-S [Volvox carteri]		UNCLASSIFIED	56994075, 60432049, 264508, 66712502, 264112, 60170831, 87168559, 264288, 264688, 264689, 21906766, 33657109, 18108370, 264638, 18108385, 60432113, 22279000, 22279002, 264564, 264566, 264567
2026	94122114 (4051, 4052)	Novel Protein sim. GBank gij165569ipirjemb CAA69032 - (Y07752) pterophorin-S [Volvox carteri]		UNCLASSIFIED	263978, 264634, 264486
2027	80249001 (4053, 4054)			UNCLASSIFIED	

2028	9469884 (4055, 4056)	Novel Protein sim. GBank gll1330345 (U58755) - coded for by C. elegans cDNA yk34b1.5; coded for by C. elegans cDNA yk13h10.5; coded for by C. elegans cDNA yk46e8.5; coded for by C. elegans cDNA yk46d5.5; coded for by C. elegans cDNA yk43c2.5; coded for by C. elegans cDNA yk46e8....	Contains protein domain (PF00632) - HECT-domain (ubiquitin-transferase).	ubiquitin	5264507, 52645156, 52646842, 56182575, 5694075, 35696286, 22278997, 22278998, 22278999, 60432049, 264259, 52645080, 29331822, 29331824, 66714117, 29331825, 29331826, 29331827, 29331828, 35696052, 264906, 264907, 264908, 29331830, 52644045, 58182435, 265006, 265009, 60432229, 33657402, 264595, 264757, 55812038, 21906754, 52646317, 52644296, 265010, 265011, 87168559, 265017, 265018, 265019, 264448, 18108354, 264288, 264389, 264766, 52644229, 21906765, 21906766, 21906767, 21906768, 21906769, 55811957, 35695917, 265020, 265021, 265022, 52644150, 33657023, 65274620, 33657109, 52645129, 18108368, 27486261, 27486262, 27486264, 27486265, 35695763, 264629, 55811576, 35696423, 35696855, 264635, 264636, 52644332, 264558, 83373044, 56526486, 22279000, 22279002, 264563, 265009, 264595, 85658542, 264555, 264556, 264557, 264558, 264559, 83373044
2029	95362032 (4057, 4058)	Novel Protein sim. GBank gll3599940 (AF017368) - facio-genital dysplasia protein 2 [Mus musculus]	Contains protein domain (PF00621) - RhoGEF domain	UNCLASSIFIED	18108394, 56994075, 22278997, 22278999, 264259, 29331822, 29331824, 29331825, 66714117, 60432228, 29331826, 264108, 66712502, 264828, 265009, 265018, 265019, 264681, 264682, 264684, 264685, 56181562, 264689, 21906769, 265022, 264692, 264693, 264628, 18108370, 18108374, 264634, 264636, 264556, 18108385, 87169518, 22279002, 264565
2030	91213734 (4059, 4060)	Novel Protein sim. GBank gll5630080 [gbIAAD-5925.1] (AC004890) similar to HUB1; similar to BAA24360 (PID:g2789430) [Homo sapiens]	Contains protein domain (PF00096) - Zinc finger, C2H2 type	transcript factor	264591, 55811957, 18108365, 264557, 264558, 18108382, 18108384
2031	80245281 (4061, 4062)				5274572, 35696286, 29331824, 264908, 265009, 264593, 265018, 264288, 264686, 264769, 21906766, 21906767, 29148627, 264628, 35696423, 264634, 264556, 18108381, 60170394, 264559, 83373044, 18108385, 264482, 264484
2032	91232607 (4063, 4064)	Novel Protein sim. GBank gll5688949 [dbj] BAA83029.1] - (AB029000) KIAA1077 protein [Homo sapiens]	Contains protein domain (PF00884) - Sulfatase	hydrolase	56181562, 264628, 264632, 264555, 264556
2033	95000808 (4065, 4066)	Novel Protein sim. GBank gll2494828 [sp] Q64686 [CAG7_RAT - ALPHA-N-ACETYL GALACTOSAMINIDE ALPHA-2-6-SIALYLTRANSFERASE (ST6GALNACIII) (STY)]		synthase	
2034	91232529 (4067, 4068)	Novel Protein sim. GBank gll4826984 [ref] NP_005147.1 [pR0D1 - UNKNOWN]	Contains protein domain (PF00076) - RNA recognition motif. (a.k.a. RRM, RBD, or RNP domain)	dna_rna_bind	22278996, 22278999, 264907, 29331830, 265008, 265018, 264681, 264682, 264684, 21906767, 21906768, 21906769, 33657109, 83373044, 56526486

2035	83553451 (4069, 4070)				264369, 264686, 265022, 26526486, 264567
2036	87115833 (4071, 4072)				29331827, 29331828, 264682, 264369, 29148627, 60432113
2037	94324833 (4073, 4074)	Novel Protein sim. GBank gij2734081 (AF000195) - similar to oxysterol-binding proteins [Caenorhabditis elegans]		UNCLASSIFIED	65274572, 22278995, 22278996, 56994075, 35686286, 22278997, 22278998, 22278999, 264259, 29331824, 60432289, 29331826, 29331828, 35696052, 264907, 29331830, 66712502, 56182435, 265008, 265009, 60170831, 264584, 55812038, 33109954, 21908754, 87168559, 265017, 265018, 265019, 264762, 264369, 264288, 21906765, 21908767, 21906768, 21906769, 55811957, 35695917, 265020, 265021, 265022, 52644150, 33657023, 33657109, 33657182, 35695763, 35695855, 264632, 264634, 264636, 56182323, 83373044, 60432113, 22279000, 22279002, 264563
2038	95422384 (4075, 4076)	Novel Protein sim. GBank gij3880625 [emb] (CAB07858) - (Z93785) predicted using GeneFINDER; similar to RNA recognition motif (aka RRM, RBD, or RNP domain); cDNA EST EMBL: T01682 comes from this gene; cDNA EST EMBL: M75823 comes from this gene; cDNA EST EMBL: D27559 comes from this ge...	Contains protein domain (PF01412) - Putative GTP-ase activating protein for Arf	UNCLASSIFIED	22278995, 22278996, 56994075, 264259, 29331824, 35696052, 264905, 264906, 52644045, 265007, 265009, 87168559, 265017, 18108351, 284448, 264369, 264766, 264767, 264686, 18108358, 21906765, 21906769, 52644150, 33657023, 264692, 18108362, 33657109, 27486262, 18108370, 18108374, 18108379, 35696423, 65274791, 264632, 264636, 18108383, 83373044, 18108385, 87168518, 22279000, 22279002, 264563, 264564, 264566
2039	95514626 (4077, 4078)	Novel Protein sim. GBank gij2224653 [dbj] (BAA20813) - (AB002354) KIAA0356 [Homo sapiens]	Contains protein domain (PF00097) - Zinc finger, C3HC4 type (RING finger)	UNCLASSIFIED	22278997, 264259, 29331822, 264905, 264906, 264907, 264908, 264909, 264510, 265009, 264910, 264593, 264758, 265011, 265018, 264762, 264288, 264766, 264768, 264769, 21906766, 33657023, 264692, 264693, 33657109, 35696423, 264631, 264632, 264634, 264635, 264636, 264637, 264639, 87168518, 264486
2040	95308417 (4078, 4080)			UNCLASSIFIED	264592
2041	95071736 (4081, 4082)	Novel Protein sim. GBank gij2500625 [sp] (P70700) [RPA2_MOUSE - DNA-DIRECTED RNA POLYMERASE I 135 KD POLYPEPTIDE (RNA POLYMERASE I SUBUNIT 2) (RPA135)]	mapolymerase		264488, 22278998, 35696052, 264905, 264907, 264908, 264910, 265018, 264605, 265019, 18108351, 264766, 264769, 21906766, 265021, 265022, 264692, 33657109, 264628, 264629, 35696423, 35695855, 264637, 264638, 264563, 264564, 264565, 264567

2042	95307447 (4083, 4084)	Novel Protein sim. GBank gij4406590[gj AAD20040] - (AF131766) Similar to Ena-VASP like protein [Homo sapiens]	Contains protein domain (PF00566) - WH1 domain	UNCLASSIFIED	60424179, 35696286, 264259, 29331826, 35696052, 29331828, 264508, 264509, 264907, 264909, 264510, 264511, 265009, 264910, 264591, 60433356, 264595, 265017, 265019, 264681, 264764, 264369, 264765, 264684, 264288, 264766, 264686, 52644229, 264769, 21906765, 35695917, 264535, 52644150, 264691, 264692, 18108365, 27486261, 27486262, 27486265, 18108374, 35696423, 65274791, 35695855, 264555, 264556, 60170394, 18108385, 264404, 22279000, 22279002, 264482, 264563, 264564, 264566
2043	94328078 (4085, 4086)	Novel Protein sim. GBank gij5052554[gj AAD38607.1 AF145632] BcDNA GH06032 [Drosophila melanogaster]	Contains protein domain (PF00122) - E1-E2 ATPase	transport	264488, 52644507, 52646365, 56994075, 22278997, 22278998, 20281171, 264259, 29331822, 29331824, 66714117, 29331826, 29331828, 33656970, 29146498, 264509, 284908, 52644045, 56182435, 265006, 33657402, 21906754, 52644296, 87168559, 265017, 265018, 265019, 264681, 264288, 264766, 264685, 264686, 21906766, 21906767, 21906768, 21906769, 265020, 265021, 60170615, 264691, 33657023, 264693, 65274620, 33657109, 33657182, 27486261, 27486262, 33657349, 35695763, 18108374, 55811576, 35695855, 18108380, 18108381, 60170394, 56182323, 264558, 83373044, 18108385, 56526486, 87168518, 60432113, 22279000, 264567
2044	87106927 (4087, 4088)	Novel Protein sim. GBank gij2246532 (U93872) - ORF 73, contains large complex repeat CR 73 [Kaposi's sarcoma-associated herpesvirus]		struct	264093, 29331827, 264905, 66712502, 264592, 264689, 21906765, 21906769, 265020, 264692, 264482, 264566
2045	79635532 (4089, 4090)				264692
2046	87320849 (4091, 4092)	Novel Protein sim. GBank gij4406698[gj AAD20062] - (AF131852) Unknown [Homo sapiens]			264259, 264906, 264683, 22279002
2047	84578801 (4093, 4094)	Novel Protein sim. GBank gij4101720 (AF006466) - lymphocyte specific formin related protein [Mus musculus]			22278999, 29147620, 29331824, 29146498, 264508, 265007, 265008, 265019, 264605, 264681, 29148627, 29148629, 265021, 33657023, 18108365, 33657109, 33657182, 18108377, 264556, 264638, 264559, 18108388
2048	84606378 (4095, 4096)			UNCLASSIFIED	264909
2049	88094690 (4097, 4098)	Novel Protein sim. GBank gij4589656[dj BAA76850.1] - (AB023223) KIAA1006 protein [Homo sapiens]		UNCLASSIFIED	264488, 264259, 29331824, 29331828, 35696052, 264906, 264907, 264908, 264909, 264910, 264603, 264763, 21906767, 21906768, 264629, 264634, 264637, 22279002, 264564, 264565, 264566, 264567

2050	79533835 (4109, 4100)			UNCLASSIFIED	264693	264488, 264259, 264509, 264906, 264907, 264769, 18108374, 35696423, 264563, 264566, 264486
2051	87780168 (4101, 4102)			UNCLASSIFIED		
2052	88096393 (4103, 4104)	Novel Protein sim. GBank gj4529889[gblAAD21812.1] - (AF134728) G9A [Homo sapiens]	Contains protein domain (PF00856) - SET domain	kinase		264488, 263994, 35696052, 264508, 264905, 264509, 264906, 264907, 264908, 264909, 264113, 264511, 265009, 264910, 60170831, 264592, 264758, 265010, 265011, 264605, 264760, 264682, 264764, 264389, 264766, 264686, 264768, 264769, 52644229, 264689, 35695917, 33657023, 33657109, 264628, 18108374, 35696423, 55811576, 35695855, 264630, 264631, 264632, 264633, 264635, 264636, 264556, 264557, 264488, 263994, 35696052, 264508, 264905, 264509, 264906, 264907, 264908, 264909, 264113, 264511, 265009, 264910, 60170831, 284592, 264758, 265010, 265011, 264605, 264760, 264682, 264764, 264369, 264766, 264686, 264768, 264769, 52644229, 264689, 35695917, 33657023, 33657109, 264628, 18108374, 35696423, 55811576, 35695855, 264630, 264631, 264632, 264633, 264635, 264636, 264556, 264557, 264488, 263994, 56526488, 60432113, 264563, 264564, 264566, 264486, 264567
2053	87763078 (4105, 4106)	Novel Protein sim. GBank gj2995449[emb]CAA75113] - (Y14848) midline 1 protein [Mus musculus]		UNCLASSIFIED		22278996, 22278997, 264259, 29331822, 264102, 264508, 35695917, 263972, 264482, 60424179, 264094, 264259, 29331825, 60424269, 264906, 60432229, 60433356, 87168559, 265019, 264760, 264288, 264686, 21908769, 33657023, 264693, 55810764, 55811576, 264635, 56182323, 60432113
2054	95358937 (4107, 4108)	Novel Protein sim. GBank gj3876326[emb]CAB02090] - (Z79754) similar to C2 domain [Caenorhabditis elegans]	Contains protein domain (PF00168) - C2 domain			264488, 29331826, 60432289, 29331828, 60433356, 265019, 264683, 264684, 265021, 33657109, 18108374, 264637, 18108385, 87168518, 60432113, 22279000, 264564
2055	88259449 (4109, 4110)	Novel Protein sim. GBank gj5353748[gblAAD42226.1]AF159133] SIR2-like protein [Oryza sativa subsp. indica]		UNCLASSIFIED		

2056	88177396 (4111, 4112)	Novel Protein sim. GBank gil14826960[re]NP_005042.1pOARS - glutamine-tRNA synthetase	Contains protein domain (PF00749) - synthase IRNA synthetases class I (E and Q)	synthase	264488, 52645156, 56182575, 22278994, 3569286, 56994075, 22278996, 22278998, 22278999, 60432049, 264259, 29331824, 60432289, 29331827, 29331828, 33656970, 264104, 264908, 264908, 265006, 265008, 60170831, 264591, 60432229, 60433438, 18108348, 21906754, 33657084, 52644296, 87168474, 265010, 87168559, 265017, 265018, 264760, 18108351, 264681, 264682, 264448, 264683, 264369, 264288, 264685, 264687, 264688, 264689, 21906765, 21906766, 21906767, 21906769, 55811957, 35695917, 265022, 33657023, 18108362, 33657109, 18108368, 33657182, 27486261, 27486264, 27486265, 33657349, 264628, 18108370, 264629, 18108374, 18108377, 18108379, 35696423, 55811576, 20281152, 264636, 264952, 18108385, 18108388, 87168518, 264482, 264565, 264566, 264567, 52646842, 52646365, 56182575, 35696286, 22278996, 22278997, 22278998, 264093, 52645080, 35696052, 29331828, 33656970, 265009, 52646317, 55811386, 52644296, 52644229, 21906769, 35695917, 265021, 60170615, 52644150, 33657109, 33657182, 27486261, 27486262, 35695763, 35696423, 35695855, 52644332
2057	87877905 (4113, 4114)	Novel Protein sim. GBank gil128850[sp]P08640[AMYH_YEAST - GLUCOAMYLASE S1/S2 PRECURSOR (GLUCAN 1,4-ALPHA- GLUCOSIDASE) (1,4-ALPHA-D-GLUCAN GLUCOHYDROLASE)		UNCLASSIFIED	
2058	86276896 (4115, 4116)	Novel Protein sim. GBank		UNCLASSIFIED	265007, 265008, 264591
2059	79866684 (4117, 4118)	Novel Protein sim. GBank gil119714[sp]P13983[EXTN_TOBAC - EXTENSIN PRECURSOR (CELL WALL HYDROXYPROLINE-RICH GLYCOPROTEIN)]		UNCLASSIFIED	29331825, 264682, 264686, 264691, 264693, 22279002
2060	83050800 (4119, 4120)	Novel Protein sim. GBank gil12811122 (U87318) - NaDC-2 [Xenopus laevis]		UNCLASSIFIED	56182575, 29331824, 29331826, 264910, 55811957, 18108370, 55811576

2061	95362204 (4121, 4122)	Novel Protein sim. GBank gil2486947[sp Q09298 YQ09_CAEEL - HYPOTHETICAL 141.2 KD PROTEIN EEED8.9 IN CHROMOSOME II	Contains protein domain (PF00069) - Eukaryotic protein kinase domain	kinase	22278997, 22278999, 264259, 29331822, 29331824, 29331828, 29331827, 35696052, 29331828, 264908, 66712502, 29331830, 264908, 264909, 264112, 264511, 265007, 265009, 264910, 264591, 33657402, 21906754, 85658542, 265017, 265019, 264448, 264683, 264288, 264684, 264369, 264686, 264687, 18108358, 264689, 21906765, 21906767, 21906768, 21906769, 265020, 265022, 264691, 33657023, 33657109, 20281149, 18108379, 35695855, 264634, 264556, 264557, 264558, 18108382, 264559, 83373044, 18108384, 56526486, 60432113
2062	87028440 (4123, 4124)	Novel Protein sim. GBank gil4502091[ref NP_001139.1 pANK2 - ankyrin 2, neuronal	Contains protein domain (PF00023) - Ank repeat	struct	264905, 264628, 264907, 264629, 264908, 264909, 18108374, 263978, 35695855, 264512, 264635, 60431850, 264636, 264760, 264563, 18108351, 264762, 264565, 264764, 264487, 264768
2063	87601272 (4125, 4126)	Novel Protein sim. GBank gil4589562[dbj BAA76803.1 - (AB023176) KIAA0959 protein [Homo sapiens]	Contains protein domain (PF00617) - RasGEF domain	oncogene	22278994, 22278999, 264259, 29331827, 264906, 264909, 52644045, 264886, 21906767, 55811957, 264692, 18108365, 263972, 55811576, 18108384, 22279002, 264482, 264563, 264564, 264484
2064	95317253 (4127, 4128)	Novel Protein sim. GBank gil1754515[dbj BAA13413.1 - (D87515) aminopeptidase-B [Rattus norvegicus]		hydrolase	264488, 52646365, 56994075, 35696286, 22278997, 22278998, 264259, 29331826, 60432289, 29331827, 29331828, 35696052, 264509, 265007, 265008, 60432229, 60433438, 21906754, 265010, 265011, 87168559, 265017, 265018, 264781, 18108351, 264682, 264369, 264288, 52644229, 21906765, 21906767, 21906768, 35695917, 33657109, 18108368, 18108374, 35696423, 35695855, 52644332, 264559, 60432113, 22279000, 22279002, 264566, 264486
2065	95022238 (4129, 4130)	Novel Protein sim. GBank gil2507144[sp Q04205 TENS_CHICK - TENSIN		kinase	264569, 18108394, 56182181, 60432289, 29331826, 264905, 264906, 264908, 60431735, 60433358, 55811386, 85658542, 265018, 55811150, 264681, 264766, 264692, 60431528, 263974, 55810764, 35695855, 264631, 264634, 264635, 60431850, 264557, 83373044, 18108388, 22279000, 22279002
2066	85793402 (4131, 4132)	Novel Protein sim. GBank gil160171 (M58295) - circumsporozoite protein [Plasmodium yoelii]	Contains protein domain (PF00096) - Zinc finger, C2H2 type	UNCLASSIFIED	56182575, 264259, 264906, 264764, 264288, 56182323, 264567

2067	85303892 (4133, 4134)				35696286, 22278997, 22278998, 60432049, 264259, 60432289, 60433438, 264682, 264448, 264369, 264288, 18108355, 21906765, 21906768, 265022, 33657109, 35696423, 35695855, 264558, 264404, 264553, 264488
2068	84344754 (4135, 4136)		UNCLASSIFIED		264687
2069	94319177 (4137, 4138)	Novel Protein sim. GBank gi 3152862 (AF064604) - KE03 protein [Homo sapiens]	Contains protein domain (PF00023) - Ank repeat		60424179, 56182575, 22278995, 22278996, 56994075, 264259, 29331822, 29331824, 29331825, 35696052, 29331828, 33656870, 264509, 264905, 56182435, 265009, 60433356, 87168559, 265017, 265018, 264604, 265019, 264448, 264764, 264766, 21906765, 21906767, 21906768, 21906769, 265020, 265021, 33657023, 33657109, 263976, 264555, 264557, 56182323, 83373044, 87168518, 60432113, 22279000, 22279002
2070	85791380 (4139, 4140)	Novel Protein sim. GBank gi 5712131 gb AAD47379.1 AF12049 - (AF12049) DEM1 protein [Homo sapiens]		UNCLASSIFIED	35695917, 264905, 264628, 264908, 264638
2071	86946116 (4141, 4142)	Novel Protein sim. GBank gi 3551531 dbj BAA33016 - (AB017437) avena [Gallus gallus]	Contains protein domain (PF00568) - WH1 domain		18108398, 265006, 265007, 265008, 265009, 264594, 265010, 265011, 18108351, 18108354, 18108364, 18108365, 18108368, 264634, 18108381, 18108385, 18108388, 18108391
2072	91718429 (4143, 4144)		Contains protein domain (PF00184) - Neurohypophyseal hormones, C-terminal Domain		22278995, 35696286, 22278997, 22278998, 22278999, 264490, 60432049, 264259, 29331822, 29331824, 29331826, 35696052, 265008, 33657402, 21906754, 265011, 265019, 18108351, 264682, 264369, 21906765, 21906766, 21906767, 21906768, 21906769, 35695917, 265020, 265021, 264690, 264692, 35696423, 264555, 264556, 264558, 22279000
2073	27925664 (4145, 4146)	Novel Protein sim. GBank gi 1504026 dbj BAA13212 - (D86978) similar to C.elegans protein (Z37093) [Homo sapiens]		UNCLASSIFIED	264556
2074	94324767 (4147, 4148)	Novel Protein sim. GBank gi 4240317 dbj BAA74937.1 - (AB020721) KIAA0914 protein [Homo sapiens]			29331822, 264909, 264511, 265009, 264594, 264595, 265010, 265011, 265017, 265018, 265019, 264448, 264683, 265020, 265021, 18108370, 264632, 83373044, 264567

2075	94314886 (4149, 4150)	Novel Protein sim. GBank gjl5138930[gb]AAD40382.1]- (AF093680) transcription factor IIB [Homo sapiens]			18108394, 22278994, 22278996, 35696286, 22278998, 22278999, 264259, 29331822, 29331825, 29331827, 35696052, 29331828, 264905, 264907, 264908, 264510, 265007, 264910, 265009, 33657084, 264760, 264448, 264288, 264766, 264767, 264699, 21906766, 21906767, 21906769, 265021, 265022, 60170615, 33657023, 27486262, 27486265, 35696423, 35695855, 264631, 264634, 264639, 87188518, 22279002, 264563, 264486, 18108391
2076	87594118 (4151, 4152)				264259, 29331826, 264508, 264908, 264510, 265007, 265011, 264288, 264637, 18108385, 264592
2077	11388877 (4153, 4154)		UNCLASSIFIED	ubiquitin	29331825, 265017, 265018, 264288, 265020, 265021, 264634, 56526486
2078	87539364 (4155, 4156)	Novel Protein sim. GBank gjl4220590[dbj]BAA74578] - (D87808) nuclear protein np95 [Mus musculus]	Contains protein domain (PF00628) - PHD-finger		264766, 22278997, 265021, 264690, 284259, 264692, 29331822, 264693, 29331824, 29331828, 264508, 264509, 264906, 264907, 264628, 20281069, 264809, 265007, 265009, 264632, 264636, 264591, 264592, 264639, 264758, 264759, 33109954, 264604, 265018, 265019, 22279002, 264563, 264564, 264448, 264684, 264567, 264685
2079	88085916 (4157, 4158)	Novel Protein sim. GBank gjl4240255[dbj]BAA74906.1] - (AB020890) KIAA0883 protein [Homo sapiens]	Contains protein domain (PF00098) - Zinc finger, CCHC class	UNCLASSIFIED	264692, 29331822, 264693, 29331824, 29331828, 264508, 264509, 264906, 264907, 264628, 20281069, 264809, 265007, 265009, 264632, 264636, 264591, 264592, 264639, 264758, 264759, 33109954, 264604, 265018, 265019, 22279002, 264563, 264564, 264448, 264684, 264567, 264685
2080	94136689 (4159, 4160)	Novel Protein sim. GBank gjl2408021[emb]CAB16219.1] - (Z99162) putative vacuolar protein [Schizosaccharomyces pombe]	Contains protein domain (PF01363) - FYVE zinc finger	UNCLASSIFIED	56182575, 264092, 29331824, 29331826, 29331830, 265017, 265018, 265020, 83373044
2081	94847186 (4161, 4162)	Novel Protein sim. GBank gjl5524734[gb]AAD4360.1[AF16635] ST7 protein [Homo sapiens]	Contains protein domain (PF00431) - CUB domain	- eph	22278996, 22278997, 22278999, 60432049, 29331822, 29331824, 33857402, 85658542, 265011, 265018, 265019, 21906787, 21906788, 264693, 18108385, 22279000, 22279002
2082	87628629 (4163, 4164)	Novel Protein sim. GBank gjl3880558[emb]CAA94234] - (Z70271) predicted using GeneFinder; similar to collagen; cDNA EST yk308e7.3 comes from this gene; cDNA EST yk308e7.5 comes from this gene; cDNA EST yk385a8.3 comes from this gene; cDNA EST yk385a8.5 comes from this gene [Caeno...]		collagen	264907, 265019
2083	94141000 (4165, 4166)	Novel Protein sim. GBank gjl2352427 (AF004161) - peroxisomal Ca-dependent solute carrier [Cryptotagus cuniculus]	Contains protein domain (PF00153) - Mitochondrial carrier proteins	- transport	56182575, 22278996, 22278997, 264259, 29331822, 29331825, 264509, 264112, 265009, 264593, 21906754, 265018, 265019, 264448, 264288, 264685, 21906769, 265020, 265022, 264691, 18108370, 65274791, 264631, 264555, 264563
2084	95199298 (4167, 4168)	Novel Protein sim. GBank gjl728836[ip39193]ALU6_HUMAN - IIII ALU SUBFAMILY SP WARNING ENTRY IIII		UNCLASSIFIED	265018, 264763, 264683, 264691

2085	94989476 (4169, 4170)	Novel Protein sim. GBank gl 1655699 emb CAA69032 - (Y07752) perophorin-S [Volvox carter]		UNCLASSIFIED	56182575, 60432289, 264908, 56182435, 87168474, 264763, 264369, 264688, 264693, 18108370, 56182323
2086	91234404 (4171, 4172)	Novel Protein sim. GBank gl 3875032 emb CAA8936 - (Z49125) similarity to Trichostrongylus colubriformis 11 kd secretory protein (Swiss Prot accession number P21937); cDNA EST EMBL:D33349 comes from this gene; cDNA EST EMBL:D37644 comes from this gene; cDNA EST EMBL:D36149 come....		UNCLASSIFIED	35696286, 264259, 35696052, 264906, 264907, 264908, 264909, 264910, 264759, 264604, 264762, 264768, 264769, 35695917, 263978, 35698423, 35695855, 264632, 264634, 264637, 264638, 264639, 56182323, 18108385, 264482, 264486
2087	21436337 (4173, 4174)			UNCLASSIFIED	264489
2088	94111527 (4175, 4176)	Novel Protein sim. GBank gl 3880930 emb CAA16334.1 - (AL021481) similar to Phosphoglucosylase and phosphomannomutase phosphoserine; cDNA EST EMBL:D36168 comes from this gene; cDNA EST EMBL:D70697 comes from this gene; cDNA EST yk373h9.5 comes from this gene; cDNA EST EMBL:T0080....			264488, 22278994, 35696286, 22278996, 29331827, 35696052, 33657402, 21906754, 33109954, 87168474, 265017, 265018, 265019, 264448, 264683, 264369, 264685, 264687, 264689, 21906765, 21906766, 21906767, 21906768, 21906769, 265020, 265021, 265022, 264692, 33657023, 33657109, 33657182, 27486281, 27486262, 33657348, 27486265, 35696423, 35695855, 83373044, 87168518, 22279000, 264567, 18108392, 264488, 52644507, 18108394, 18108397, 52648842, 18108398, 56182575, 22278994, 22278995, 35696286, 22278996, 56994075, 22278997, 22278998, 22278999, 264091, 264092, 264093, 264094, 60432049, 264259, 29331822, 20281099, 29331824, 29331825, 29331826, 29331827, 29331828, 35696052, 33656970, 29146498, 29146499, 264102, 264106, 264107, 264109, 264508, 264905, 264509, 264906, 264907, 264908, 66712502, 264828, 52644045, 264809, 56182435, 264110, 264112, 264510, 264511, 265006, 264512, 265007, 265008, 264910, 265009, 60170831, 264592, 264593, 60433356, 33657402, 60433438, 264595, 55812038, 264758, 21906754, 33657084, 55811386, 52644296, 265010, 265011, 87168559, 265017, 265018, 265019, 264760, 264761, 55811150, 264762, 18108351, 264682, 264448, 264763, 264764, 264683, 264389, 18108354, 264288, 264685, 264766, 264688, 264687, 264768, 52644228, 264688, 18108358, 56181562, 264769, 18108359, 264689, 21906765, 21906766, 21906767, 21906768, 29148627, 21906769, 55811957, 29148629, 29148784, 35695917, 265020, 265021, 265022, 60170815, 264690,
2089	95422801 (4177, 4178)	Novel Protein sim. GBank gl 4758118 ref NP_004623.1 pDAP3 - Death associated protein 3	cadherin		

2090	88222470 (4179, 4180)				22278995, 22278998, 22278999, 264259, 29331826, 35698052, 284910, 33657402, 60433438, 33109954, 87168474, 87168559, 265018, 265019, 264681, 264684, 264686, 264687, 264688, 264689, 21908765, 21908766, 21908767, 21908769, 35695917, 265022, 60170615, 33857023, 35696423, 35695855, 264952, 18108387, 22279000, 263994, 264905, 264908, 264511, 264512, 265008, 264910, 55811386, 264288, 264768, 56181562, 21906765, 21906768, 21906769, 265022, 264628, 264563, 264567
2091	95309161 (4181, 4182)	Novel Protein sim. GBank gij4580997 gb AAD24571.1 AF121081 cAMP inducible 2 protein [Mus musculus]		UNCLASSIFIED	
2092	88223605 (4183, 4184)			homeobox	22278997, 22278999, 66712502, 87168559, 264683, 265021, 264486
2093	87406073 (4185, 4186)	Novel Protein sim. GBank gij2352427 (AF004161) - peroxisomal Ca-dependent solute carrier [Cryptotagus cuniculus]	Contains protein domain (PF00153) - Mitochondrial carrier proteins	transport	264905, 264906, 264907, 264908, 264510, 265006, 265007, 265009, 264910, 264596, 21906754, 87168474, 265011, 264603, 265018, 265019, 264760, 264766, 264768, 264769, 21906767, 21906768, 21906769, 265021, 264690, 33857023, 264693, 264628, 264634, 264636, 264637, 264557, 56182323, 264564
2094	91230929 (4187, 4188)	Novel Protein sim. GBank gij4929551 gb AAD34036.1 AF15179 - (AF151799) CGI-40 protein [Homo sapiens]		MHC	35696286, 265017, 265018, 265019, 18108388
2095	95351526 (4189, 4190)	Novel Protein sim. GBank gij1363238 pir A57284 - spermatid perinuclear RNA-binding protein Spnr - mouse	Contains protein domain (PF00035) - Double-stranded RNA binding motif	dna_rna_bind	35696286, 52644045, 265006, 265007, 265008, 87168559, 18108351, 21908769, 29148784, 265020, 33857023, 27486262, 18108374, 18108388
2096	94119760 (4191, 4192)	Novel Protein sim. GBank gij3834423 (AF070689) - cytoplasmic dynein intermediate chain isoform DIC1a [Drosophila melanogaster]	Contains protein domain (PF00400) - WD domain, G-beta repeat	ATPase_associated	264488, 264489, 65274572, 56182575, 22278996, 22278997, 22278999, 284259, 60432289, 29331826, 35696052, 264107, 264508, 264509, 264905, 264906, 264907, 264908, 52644045, 264909, 284510, 264511, 264512, 265008, 264910, 265009, 264592, 60433356, 60433438, 264758, 264596, 55812038, 21906754, 264601, 264602, 264605, 264762, 264681, 18108351, 264764, 264683, 264288, 264687, 264768, 264769, 264689, 21908765, 21908766, 21908767, 35695917, 265020, 265022, 52644150, 264691, 264692, 33857023, 264693, 27486261, 35695763, 264628, 264629, 35696423, 35695855, 264631, 264632, 264634, 264635, 264555, 264637, 263981, 264638, 264639, 264563, 264483, 264565, 264566, 264486, 264567

2097	95322772 (4193, 4194)	Novel Protein sim. GBank gij5174501[ref]NP_006051.1pLYF1 - zinc finger protein, subfamily 1A, 1 (Ikaros)	(Contains protein domain (PF00096) - Zinc finger, C2H2 type	transcription factor	65274572, 264511, 265010, 264600, 265017, 264448, 264288, 265021, 60170815, 264692, 33657109, 18108370, 264636, 264483 56994075, 264259, 264288, 265020, 264563
2098	87780340 (4195, 4196)	Novel Protein sim. GBank gij4758208[ref]NP_004081.1pDUSP - dual specificity phosphatase 3 (vaccinia virus phosphatase VH1-related)	Contains protein domain (PF00782) - Dual specificity phosphatase, catalytic domain	phosphatase	
2099	95412927 (4197, 4198)	Novel Protein sim. GBank gij2695659 (AF026954) - pyruvate dehydrogenase phosphatase regulatory subunit precursor, PDP1 [Bos taurus]		phosphatase	65274572, 264905, 65274444, 264691, 264636, 264555
2100	95332858 (4199, 4200)	Novel Protein sim. GBank gij3881189[emb]CAB16514] - (Z98281) similar to ADP-ribosylation factor: cDNA EST EMBL:C08179 comes from this gene: cDNA EST EMBL:C08337 comes from this gene: cDNA EST EMBL:C08829 comes from this gene: cDNA EST yk291b4.5 comes from this gene: cDNA EST yk4...	Contains protein domain (PF00025) - ADP-ribosylation factor family	nuc_rept	56182575, 22278995, 22278996, 22278997, 22278998, 60432049, 264259, 29331822, 29331824, 29331825, 29331827, 29331828, 29146488, 264909, 265008, 265009, 264910, 264591, 60432229, 60433356, 33657402, 264758, 21906754, 85858542, 87168474, 265017, 265018, 265019, 264681, 18108351, 264762, 264448, 264369, 264288, 18108355, 264686, 21906765, 21906767, 21906768, 21906769, 265020, 265021, 33657023, 18108374, 35696423, 264558, 83373044, 87168518, 60432113, 22279000, 22279002, 264091, 29331824, 264105, 265007, 265010, 18108380
2101	87762604 (4201, 4202)	Novel Protein sim. GBank gij4589468[dbj]BAA76761.1] - (AB012808) mBOCT [Mus musculus]		UNCLASSIFIED	264488, 264489, 35696286, 264259, 35696052, 264508, 264905, 264907, 264908, 264909, 264511, 264512, 264591, 264593, 60433356, 264758, 264601, 264605, 264760, 18108351, 264448, 264764, 264288, 264767, 264768, 21906769, 35695917, 18108374, 264634, 264555, 264559, 264563, 264482, 264486
2102	87770461 (4203, 4204)	Novel Protein sim. GBank gij3874149[emb]CAA97423.1] - (Z73103) predicted using GeneFinder [Caenorhabditis elegans]		UNCLASSIFIED	65274572, 56994075, 22278999, 264259, 29331824, 29331825, 35696052, 29331828, 66712502, 265009, 60170831, 264595, 33109954, 85658542, 87168559, 265017, 265019, 264448, 21906765, 21906768, 265022, 33657023, 27486262, 33657349, 35695763, 60431528, 18108374, 55811576, 56182323, 18108387, 87168518, 60432113, 264564
2103	95413576 (4205, 4206)	Novel Protein sim. GBank gij4240159[dbj]BAA74858.1] - (AB020842) KIAA0835 protein (Homo sapiens)	Contains protein domain (PF01530) - Zinc finger, C2HC type	transcription factor	
2104	85776161 (4207, 4208)			UNCLASSIFIED	264592, 264604, 22279000

2105	94848080 (4209, 4210)	Novel Protein sim. GBank gj1707032 (U80445) - coded for by C. elegans cDNA yk13g5.3; coded for by C. elegans cDNA yk21g6.3; coded for by C. elegans cDNA CEMSE18F; coded for by C. elegans cDNA yk126b1.3; coded for by C. elegans cDNA yk65h8.3; coded for by C. elegans cDNA yk65h8....		UNCLASSIFIED	264488, 56182575, 22278994, 56994075, 22278996, 22278997, 22278998, 22278999, 60432049, 264259, 29331822, 29331824, 29331826, 60432289, 29331827, 29331828, 264508, 264905, 264509, 264907, 29331830, 52644045, 264510, 264511, 265007, 264512, 265009, 60170831, 60432229, 33657402, 60433356, 264595, 60433438, 264758, 33657084, 87168474, 265010, 87168559, 265017, 265018, 265019, 264762, 18108351, 264684, 18108354, 264288, 264686, 52644229, 18108359, 21906785, 21906786, 21906787, 21906788, 21906789, 35695917, 265020, 265022, 60170615, 52644150, 264692, 33657023, 264693, 33657109, 60431528, 18108374, 55274791, 35695855, 264635, 60170394, 264639, 264558, 18108385, 18108387, 56526486, 87168518, 60432113, 264564, 264566, 264567, 265008, 265019
2106	83365475 (4211, 4212)				
2107	79822662 (4213, 4214)	Novel Protein sim. GBank gj3881524[emb]CAA938831 - (Z70038) ZK1087.4 [Caenorhabditis elegans]			264906, 264639
2108	94233976 (4215, 4216)	Novel Protein sim. GBank gj3176689 (AC003671) - Contains similarity to ubiquitin carboxyl-terminal hydrolase 14 gp[Z35927 from S. cerevisiae. [Arabidopsis thaliana]		UNCLASSIFIED	264905, 264906, 264907, 264908, 264909, 264758, 265011, 264600, 264601, 264764, 264766, 264767, 264768, 264769, 264693, 264629, 35695855, 264632, 264634, 264635, 264638, 264639, 83373044, 264486
2109	80478719 (4217, 4218)			UNCLASSIFIED	18108348, 264769, 18108370, 18108374, 264555, 264556, 264557, 264558
2110	87729075 (4219, 4220)	Novel Protein sim. GBank gj481043[pir]S37671 - bal2 protein - human		UNCLASSIFIED	264584
2111	87818419 (4221, 4222)				
2112	87283783 (4223, 4224)	Novel Protein sim. GBank gj2143639[pir]I56542 - calmodulin-binding protein - rat	Contains protein domain (PF00069) - struct	UNCLASSIFIED	264766, 35695917, 264630, 264567, 264486
2113	78941388 (4225, 4226)	Novel Protein sim. GBank gj4426629[gb]AAD20459] - (AF100960) protocadherin [Rattus norvegicus]	Eukaryotic protein kinase domain		264508, 264906, 264591, 264682, 22279002
2114	87889342 (4227, 4228)	Novel Protein sim. GBank gj3327184[gb]BAA31660] - (AB014585) KIAA0685 protein [Homo sapiens]	Contains protein domain (PF00028) - cadherin		265006
2115	90953785 (4229, 4230)	Novel Protein sim. GBank gj4757890[re]NP_004328.1pc8OR - chromosome 8 open reading frame 1		UNCLASSIFIED	66714117, 29331826, 29331827, 60433438, 55812038, 265017, 265019, 264689, 21906769, 55811957, 265020, 265021, 33657109, 60170394, 264558
					65274572, 264689, 264691, 264692, 60432113

2116	88258387 (4231, 4232)	Novel Protein sim. GBank gij2246532 (U93872) - ORF 73, contains large complex repeat CR 73 [Kaposi's sarcoma-associated herpesvirus]		struct	3568286, 22278999, 56182181, 28331824, 29331825, 29331827, 35696052, 264907, 56182435, 265008, 264591, 55812038, 55811386, 87168559, 264288, 264369, 21906769, 29148629, 33657023, 35695763, 55811576, 35696423, 18108385
2117	87788904 (4233, 4234)	Novel Protein sim. GBank gij2330021 (AF019250) - kinesin-related protein; KRP; Costal2 [Drosophila melanogaster]		struct	29331824, 264511, 265009, 33109954, 265017, 265018, 264288, 264689, 265020, 264692, 56526486, 264482
2118	87078894 (4235, 4236)	Novel Protein sim. GBank gij1079307 [p] [B56573] - nuclear pore complex glycoprotein p62 - African clawed frog		glycoprotein	264259, 264805, 264907, 264908, 264510, 264511, 265009, 264910, 265010, 264602, 264288, 264768, 264693, 263987, 263972, 264638, 264559
2119	86999317 (4237, 4238)	Novel Protein sim. GBank gij4321407 [gb] [AAD15748] - (AF047890) ATP-binding cassette protein M-ABC1 [Homo sapiens]		UNCLASSIFIED	264693, 18108385
2120	87788395 (4239, 4240)	Novel Protein sim. GBank gij4885527 [ref] [NP_005480.1] pNSP3 - novel SH2-containing protein 3	Contains protein domain (PF00017) - eph Src homology domain 2		264091, 264259, 29331826, 29331828, 265017, 264604, 264288, 264685, 265020, 264691, 18108370, 55810784, 264555, 264636, 60432113
2121	80021375 (4241, 4242)	Novel Protein sim. GBank gij4757728 [ref] [NP_004886.1] pAGTA - angiotensin/vasopressin receptor AII/AVP-like		UNCLASSIFIED	264601, 264766, 263978
2122	91230931 (4243, 4244)	Novel Protein sim. GBank gij4929551 [gb] [AAD34036.1] AF15179 - (AF151799) CG1-40 protein [Homo sapiens]			18108394, 56182575, 22278997, 29331822, 29331824, 29331825, 29331826, 29331828, 264907, 56182435, 265007, 264910, 265010, 265018, 264686, 265020, 55811576, 264555, 264637, 18108382, 83373044, 18108383, 18108384, 56526486, 264565, 264567
2123	86787898 (4245, 4246)	Novel Protein sim. GBank gij22424551 [db] [BAA20764] - (AB002303) KIAA0305 [Homo sapiens]	Contains protein domain (PF01363) - struct FYVE zinc finger		18108396, 264757, 265011, 18108351, 264691, 264634, 18108385
2124	83005951 (4247, 4248)	Novel Protein sim. GBank gij5689455 [db] [BAA83011.1] - (AB028982) KIAA1059 protein [Homo sapiens]	Contains protein domain (PF00801) - transport		29331822, 264906, 264907, 264591, 264639, 264563
2125	95354041 (4249, 4250)	Novel Protein sim. GBank gij728831 [sp] [P39188] [ALU1_HUMAN - III] ALU SUBFAMILY J WARNING ENTRY III	PKD domain	UNCLASSIFIED	264259, 264509, 264907, 264511, 85658542, 264763, 21906765, 35695917, 264636, 264486
2126	95084231 (4251, 4252)	Novel Protein sim. GBank gij4539264 [emb] [CAB39853.1] - (AL049495) conserved hypothetical protein [Schizosaccharomyces pombe]		UNCLASSIFIED	264488, 264489, 29331827, 35696052, 264905, 264509, 264908, 264909, 264510, 265009, 264591, 264592, 264593, 33657402, 264594, 264595, 264598, 264758, 264601, 264603, 265018, 264604, 264605, 264760, 264881, 264762, 264683, 264764, 264684, 264288, 264685, 264689, 60170615, 33657023, 33657109, 55810784, 264635, 264636, 264637, 264638, 264639, 83373044, 264564, 264566

2127	81118652 (4253, 4254)	Novel Protein sim. GBank gjl4868435[gb]AAD31315.1[AF143236] apoptosis related protein APR-2 [Homo sapiens]			35596286, 29331826, 35596052, 264508, 264509, 264905, 264906, 264907, 264908, 264909, 264510, 265006, 264511, 264512, 265007, 265009, 264910, 264758, 265011, 264600, 264601, 264604, 264762, 264763, 264765, 264687, 264768, 264769, 264689, 35595917, 264690, 264691, 264692, 264693, 264629, 18108374, 35595855, 264632, 264634, 264635, 264636, 264637, 264638, 264639, 18108385, 264563, 264564, 264567, 56182575, 35596286, 56182181, 29331824, 60432289, 35596052, 264905, 264907, 66712502, 264908, 264909, 264510, 264512, 265009, 264910, 264591, 55812038, 265018, 264764, 264288, 264369, 264687, 264768, 55811957, 264692, 18108388, 264628, 264632, 264634, 264635, 264637, 56182323, 264639, 18108384, 18108388, 264563, 264567
2128	87414262 (4255, 4256)				66714117, 264828, 264595, 55812038, 55811150, 55811957, 264693, 18108374, 263978, 65274791, 18108381, 83373044, 22279000 263981
2129	95102089 (4257, 4258)		UNCLASSIFIED		
2130	95417144 (4259, 4260)	Novel Protein sim. GBank gjl2649235 (AE001012) - conserved hypothetical protein [Archaeoglobus fulgidus]			
2131	85723065 (4261, 4262)	Novel Protein sim. GBank gjl1086886 (U41276) - Similar to potassium channel protein, [Caenorhabditis elegans]		Contains protein domain (PF00805) - potassium_channel Peptide repeats (8 copies)	35596052, 264909, 264768, 35595917
2132	95361096 (4263, 4264)	Novel Protein sim. GBank gjl5689373[idb]BAA82973.1 - (AB028944) KIAA1021 protein [Homo sapiens]		Contains protein domain (PF00122) - ATPase E1-E2 ATPase	264488, 22278999, 264259, 29331827, 29331828, 35596052, 264509, 264905, 264906, 264907, 264908, 264909, 264510, 265006, 264511, 265007, 264910, 264591, 264592, 264595, 264758, 21906754, 33109954, 87168474, 265011, 264600, 264601, 264605, 265019, 264760, 18108351, 264681, 264762, 264764, 264288, 264684, 264766, 264686, 264687, 264768, 264769, 264688, 21906769, 264690, 52644150, 264691, 264693, 18108370, 264628, 264629, 18108372, 18108374, 35596423, 35595855, 264631, 264634, 264635, 264636, 264555, 264637, 18108380, 264639, 264558, 56182323, 56526486, 264564, 264565, 264566, 264567

2133	95351539 (4265, 4266)	Novel Protein sim. GBank gij4220489 (AC006089) - hypothetical protein [Arabidopsis thaliana]		UNCLASSIFIED	60424179, 52646365, 52646842, 56894075, 35696286, 22278997, 22278998, 60432049, 56182181, 66714117, 60424269, 29331826, 29331828, 35696052, 264905, 264906, 264907, 66712502, 29331830, 56182435, 265006, 264512, 265008, 60431735, 60433356, 33657402, 55812038, 33109954, 21906754, 55811386, 265010, 264603, 265017, 265018, 265019, 55811150, 18108351, 264682, 264369, 264288, 52644229, 56181562, 21906765, 21906766, 21906767, 21906768, 21906769, 55811957, 35695917, 265020, 265021, 60170615, 33657023, 33657109, 60431528, 18108374, 35696423, 65274791, 35695855, 264634, 60431850, 18108380, 56182323, 83373044, 18108385, 18108387, 60432113, 22279002, 264563, 264566
2134	95412697 (4267, 4268)	Novel Protein sim. GBank gij3875351[emb]CAB094151 - (Z96047) DY3.6 [Caenorhabditis elegans]			56181686, 35696286, 21906754, 55811386, 265011, 265017, 18108351, 264765, 264766, 264688, 21906768, 35695917, 265020, 33657023, 264628, 35695855, 264632, 264555, 264556, 264557, 264558, 18108382, 22279002
2135	88079813 (4269, 4270)	Novel Protein sim. GBank gij5689559[dj]BAA83063.11 - (AB029034) KIAA1111 protein [Homo sapiens]	Contains protein domain (PF00628) - PHD-finger	UNCLASSIFIED	22279999, 29331828, 35696052, 264906, 264908, 264910, 265009, 264591, 264758, 52646317, 265011, 87188559, 264601, 18108351, 264448, 264683, 264684, 264689, 18108359, 264691, 33657023, 264692, 35695763, 264629, 35695855, 264631, 264635, 264636, 264637, 56182323, 264639, 22279002, 264564
2136	84346478 (4271, 4272)	Novel Protein sim. GBank gij2662167[dj]BAA237151 - (AB007903) KIAA0443 [Homo sapiens]		UNCLASSIFIED	264639
2137	87637716 (4273, 4274)	Novel Protein sim. GBank gij4884110[emb]CAB43262.11 - (AL050090) hypothetical protein [Homo sapiens]		UNCLASSIFIED	264559, 264909, 33109954, 264763, 21908768, 60170394, 18108385, 264563
2138	87395446 (4275, 4276)	Novel Protein sim. GBank gij5174779[gj]AAD40696.11 - (U87804) 50 kDa protein [Caulobacter crescentus]		ATPase-associated	264259, 29331828, 35696052, 264909, 265006, 265017, 265018, 18108351, 264288, 21906768, 33657023, 33657109, 264628, 18108374, 35695855, 264634, 264555, 264556, 264557, 264558, 264559
2139	84843682 (4277, 4278)	Novel Protein sim. GBank gij3850821[emb]CAA771351 - (Y18350) U2 snRNP auxiliary factor, large subunit [Nicotiana glauca]			264905, 264910, 264591, 55812038, 55811386, 85658542, 264760, 18108351, 18108359, 55811957, 265020, 265021, 33657023, 18108364, 55811576, 83373044, 18108385, 56526486, 264482

2140	87645555 (4279, 4280)	Novel Protein sim. GBank gij4417293jgb AAD20418 - (AC007019) unknown protein [Arabidopsis thaliana]		UNCLASSIFIED	264488, 264259, 29331824, 264104, 264109, 264509, 265008, 264759, 265018, 264448, 264288, 21906768, 55811957, 265021, 33657023, 27486265, 35696423, 264636, 264556, 264557, 264559, 264566
2141	79623986 (4281, 4282)			UNCLASSIFIED	265020, 264893
2142	80041222 (4283, 4284)			UNCLASSIFIED	263978
2143	94140051 (4285, 4286)	Novel Protein sim. GBank gij2135766jpr J53362 - mucin 5AC (done JER47) - human (fragment)		UNCLASSIFIED	22278997, 29331827, 264907, 265020, 60432113
2144	94320114 (4287, 4288)	Novel Protein sim. GBank gij2078483 (U43200) - antifreeze glycopeptide AFGP polypeptide precursor [Boreogadus saida]		UNCLASSIFIED	65274572, 264259, 29331824, 29331827, 264906, 264908, 264591, 265011, 87168559, 264600, 265019, 264288, 264768, 21906765, 21906767, 55811576, 35696423, 65274791, 22279002
2145	20564305 (4289, 4290)			UNCLASSIFIED	263978
2146	87010515 (4291, 4292)	Novel Protein sim. GBank gij1255871 (U53341) - short region of weak similarity to bovine membrane receptor p63 (PIR:S28503) [Caenorhabditis elegans]		UNCLASSIFIED	264909, 60433356, 264686
2147	80432811 (4293, 4294)	Novel Protein sim. GBank gij3080398jemb CAA18718.1 - (AL022603) putative protein [Arabidopsis thaliana]		UNCLASSIFIED	264907, 264768, 264769, 18108385
2148	80048811 (4295, 4296)	Novel Protein sim. GBank gij1728837 sp P39194 ALU7_HUMAN - IIII ALU SUBFAMILY SQ WARNING ENTRY IIII		UNCLASSIFIED	264593
2149	87362022 (4297, 4298)	Novel Protein sim. GBank gij119863 sp P20693 FCE2_MOUSE - LOW AFFINITY IMMUNOGLOBULIN EPSILON FC RECEPTOR (LYMPHOCYTE IGE RECEPTOR) (FC-EPSILON-RII) (CD23)	Contains protein domain (PF00059) - Lecitin C-type domain	glycoprotein	29331824, 29331826, 35696052, 264758, 87168474, 265018, 52644150, 33657109
2150	94140059 (4299, 4300)	Novel Protein sim. GBank gij5420387jemb CAB46679.1 - (AJ243459) proteophosphoglycan [Leishmania major]		UNCLASSIFIED	22278998, 29331822, 29331824, 29331828, 264764, 264769, 21906766, 264486
2151	95353241 (4301, 4302)	Novel Protein sim. GBank gij5689407jdb BAA82987.1 - (AB028958) KIAA1035 protein [Homo sapiens]			22278996, 56994075, 22278999, 60432049, 264259, 29331822, 29331824, 29331826, 35696052, 29331828, 264508, 264511, 60433356, 264758, 264596, 33109954, 60174639, 265010, 265011, 87168559, 265017, 265018, 265019, 264448, 264288, 264689, 21906765, 21906766, 21906768, 265020, 60170615, 33657109, 33657182, 33657349, 18108370, 264635, 264557, 60170394, 18108385, 87168518, 22279000
2152	79321640 (4303, 4304)	Novel Protein sim. GBank gij3452473 (AF084205) - serine/threonine protein kinase TAO1 [Rattus norvegicus]		kinase	18108397, 18108398, 265007, 264591, 265011, 18108351, 18108368, 18108374, 18108388

2153	88313371 (4305, 4308)	Novel Protein sim. GBank gi 4758704 ref NP_004216.1 pMASL - MFH-amplified sequences with leucine-rich tandem repeats 1	Contains protein domain (PF00560) - Leucine Rich Repeat	glycoprotein	264488, 263994, 52646842, 22278996, 22278998, 22278999, 264259, 29331822, 35696052, 264508, 264509, 264905, 264906, 264907, 264908, 264909, 56182435, 264510, 264511, 264512, 264758, 87168474, 87168559, 265017, 265019, 264760, 264288, 264369, 264766, 264687, 264769, 52644229, 21906768, 21906768, 35695917, 33657023, 33657109, 35695855, 264631, 264632, 264635, 264636, 264639, 18108385, 264483, 264564, 264488
2154	87408034 (4307, 4308)	Novel Protein sim. GBank gi 225150 pr j1209265U - chorion protein B11 [Bombyx mori]		UNCLASSIFIED	56994075, 264094, 265009, 265019, 264288, 21906767, 35695917
2155	87424072 (4309, 4310)			UNCLASSIFIED	18108392, 18108398, 22278996, 264259, 29331824, 265008, 265010, 265011, 265017, 265019, 264288, 264686, 265020, 264693, 264628, 56182323
2156	84295205 (4311, 4312)	Novel Protein sim. GBank gi 3970986 (AC004974) - spa-1- like; similar to AF026504 (PID:g2555183) [Homo sapiens]			265007, 264684
2157	87316344 (4313, 4314)	Novel Protein sim. GBank gi 1076211 pr j550755 - hypothetical protein VSP-3 - Chlamydomonas reinhardtii		UNCLASSIFIED	264591
2158	86444218 (4315, 4316)	Novel Protein sim. GBank gi 4650844 dbj BAA77027.1 - (AB026180) Kelch motif containing protein [Homo sapiens]	Contains protein domain (PF00651) - BTB/POZ domain	dna_rna_bind	264596
2159	80083729 (4317, 4318)	Novel Protein sim. GBank gi 2879925 dbj BAA24826 - (AB007897) KIAA0437 [Homo sapiens]			29331822, 264112, 265009, 264691, 33657023, 264634
2160	16283674 (4319, 4320)				264634
2161	87739131 (4321, 4322)	Novel Protein sim. GBank gi 1504006 dbj BAA13202 - (D86966) similar to human ZFY protein. [Homo sapiens]		UNCLASSIFIED	265008
2162	94319528 (4323, 4324)			UNCLASSIFIED	65274572, 264508, 264805, 264906, 264907, 264908, 52644045, 264909, 265007, 264910, 264591, 264592, 264593, 55812038, 264596, 264758, 265011, 264600, 264762, 264763, 264683, 264764, 264288, 264766, 264686, 264768, 264769, 264689, 265020, 264691, 264628, 264629, 263978, 264632, 264634, 264557, 264638, 264639, 18108385, 264563, 264566, 264567
2163	95417158 (4325, 4326)	Novel Protein sim. GBank gi 3876537 emb CAA98270 - (Z73974) cDNA EST yk29115.3 comes from this gene; cDNA EST yk29115.5 comes from this gene [Caenorhabditis elegans]		UNCLASSIFIED	56182575, 22278996, 264093, 264683, 33657023, 65274620, 60432113
2164	80569458 (4327, 4328)		Contains protein domain (PF01006) - Hepatitis C virus non-structural protein NS4a	collagen	264603, 264637, 264565

2165	84329169 (4329, 4330)	Novel Protein sim. GBank glj1086794 (U41107) - No definition line found [Caenorhabditis elegans]		UNCLASSIFIED	56994075, 22278996, 22278997, 22278998, 264259, 29331822, 29331824, 29331825, 29331826, 29331827, 29331828, 264906, 29331830, 56182435, 265009, 21906754, 33657084, 265011, 265019, 264448, 264288, 264389, 21906765, 21906768, 21906769, 265020, 265021, 264691, 264692, 33657023, 65274620, 35695855, 264556, 60170394, 83373044, 60432113, 22278992, 264567
2166	87618934 (4331, 4332)	Novel Protein sim. GBank glj2706522[emb]CAA75816] - (Y15895) ubiquitin activating enzyme [Drosophila melanogaster]	ubiquitin		52645156, 22278994, 22278998, 66714117, 29331828, 52644045, 265018, 265019, 264369, 21906765, 21906767, 21906768, 21906769, 265021, 265022, 264693, 27486262, 35695763, 18108376, 56526486, 87168518, 264567
2167	87716864 (4333, 4334)	Novel Protein sim. GBank glj2224713[dbj]BAA20840] - (AB002384) KIAA0386 [Homo sapiens]		UNCLASSIFIED	56182575, 35696286, 29331824, 29331826, 29146498, 56182435, 265008, 265009, 264592, 264593, 33657402, 33109954, 265011, 265017, 265018, 18108351, 264369, 21906784, 21906765, 21906768, 29148627, 21906769, 52644150, 33657109, 35698423, 18108381, 18108384, 18108385, 60432113, 264567
2168	86989334 (4335, 4336)	Novel Protein sim. GBank glj4321407[gb]AAD15748] - (AF047690) ATP-binding cassette protein M-ABC1 [Homo sapiens]	Contains protein domain (PF00664) - ABC transporter transmembrane region.	transport	66714117, 29331827, 264907, 264511, 264591, 265018, 264784, 264683, 264766, 264768, 264566
2169	87886937 (4337, 4338)				264629, 264555, 264559
2170	94141033 (4339, 4340)	Novel Protein sim. GBank glj5106521[gb]AAD39741.1[AF10536] - (AF105365) K-CI cotransporter KCC4 [Homo sapiens]		UNCLASSIFIED	65274572, 56182575, 22278997, 22278998, 264259, 29331825, 264509, 264906, 56182435, 60433438, 55812038, 264596, 55811386, 265019, 264762, 264763, 264448, 264784, 264684, 264288, 264766, 264685, 56181562, 264689, 55811957, 265020, 264535, 264691, 33657109, 60431528, 18108374, 35698423, 55811576, 65274791, 264634, 264639, 264558, 87168518, 60432113, 264564
2171	80194050 (4341, 4342)			UNCLASSIFIED	264369, 265020, 264558
2172	85452460 (4343, 4344)			UNCLASSIFIED	264259, 264558
2173	87036740 (4345, 4346)	Novel Protein sim. GBank glj4309681[gb]AAD15478] - (AC006930) R33423.1 [Homo sapiens]		UNCLASSIFIED	264369
2174	95003288 (4347, 4348)	Novel Protein sim. GBank glj2493778[sp]Q09456]YQ35_CAEEL - PUTATIVE CUTICLE COLLAGEN C09G5.5			264906, 35695855, 264555, 264557

2175	94325850 (4349, 4350)	Novel Protein sim. GBank gij1263287 (U47855) - fibroin-3 (Araneus diadematus)		UNCLASSIFIED	264488, 35696286, 20281099, 29331826, 60432289, 35696052, 264109, 264508, 264509, 264905, 264908, 264907, 264908, 264909, 264510, 264511, 265006, 265007, 264512, 265008, 264910, 264591, 264594, 264595, 264598, 264758, 55812038, 265011, 264600, 264603, 264760, 264762, 264448, 264764, 264288, 264766, 264686, 264687, 21906788, 55811957, 35695917, 265020, 265022, 264691, 264692, 33657023, 264693, 264628, 264629, 55811576, 35696423, 65274791, 35695855, 264631, 264632, 264634, 264635, 264636, 264637, 264638, 264639, 264558, 18108385, 60432113, 264563, 264564, 264565, 264566, 264486, 264567
2176	88223392 (4351, 4352)	Novel Protein sim. GBank gij728837isp39194IALU7_HUMAN - III ALU SUBFAMILY SQ WARNING ENTRY IIII	Contains protein domain (PF00805) - Pentapeptide repeats (8 copies)	oncogene	52644507, 52646842, 22278994, 35696286, 22278996, 22278998, 29331826, 29331827, 35696052, 29331828, 33656970, 29331830, 264910, 33657402, 264758, 52644296, 87168559, 265018, 264689, 21908785, 21908767, 21908769, 35695917, 52644150, 264690, 33657023, 33657109, 52645129, 33657182, 27486261, 27486262, 33657349, 18108376, 18108377, 35695855, 87168518, 60432113, 264404, 22279000, 264486
2177	94128942 (4353, 4354)	Novel Protein sim. GBank gij5454072ref(NP_006416.1pSLU7 - step II splicing factor SLU7		kinase	18108392, 22278997, 22278999, 264093, 33657402, 265019, 264448, 264766, 264689, 21906767, 21906768, 21906769, 265021, 33657023, 18108370, 18108374, 60432113, 22279002
2178	87601557 (4355, 4356)	Novel Protein sim. GBank gij473407 (U08215) - NST-1 [Mus musculus]	Contains protein domain (PF00012) - Hsp70 protein	eph	264488, 22278996, 22278999, 29331824, 29331825, 29331826, 29331827, 52644296, 87168474, 18108370, 35695855, 22279002
2179	87316275 (4357, 4358)			UNCLASSIFIED	60424269, 264760, 264628, 264632

2180	95351397 (4359, 4360)	Novel Protein sim. GBank gi 3122317 sp P90648 KMH_B_DICDI - MYOSIN HEAVY CHAIN KINASE B (MHCK B)	Contains protein domain (PF00400) - WD domain, G-beta repeat	kinase	52644507, 22278994, 35696286, 22278997, 22278999, 264259, 52645080, 29331822, 29331824, 29331825, 29331826, 29331828, 33656970, 264508, 264509, 264906, 264908, 29331830, 264909, 264510, 265006, 265007, 33657402, 55812038, 21906754, 87168474, 87168559, 265017, 265018, 265019, 264763, 264682, 264683, 264684, 264288, 264686, 21906765, 21906766, 21906769, 265020, 265021, 265022, 52644150, 33657023, 33657109, 27486265, 33657349, 18108374, 35696423, 35695955, 263981, 60170394, 18108385, 56526486, 87168518, 60432113, 22279000, 264482, 264566, 264567, 264486 29331827, 264369, 18108376, 264564
2181	85764930 (4361, 4362)	Novel Protein sim. GBank gi 3024689 sp Q15542 T2D4_HUMAN - TRANSCRIPTION INITIATION FACTOR TFIID 100 KD SUBUNIT (TAFII100)		kinase	
2182	87637731 (4363, 4364)	Novel Protein sim. GBank gi 5420387 emb CAB46679.1 - (AJ243459) proteophosphoglycan [Leishmania major]		UNCLASSIFIED	22278996, 22278997, 22278999, 264259, 29331822, 56182435, 284112, 264764, 264288, 21906767, 21906768, 21906769, 33657109, 18108376, 60170394, 22279000, 22279002 264760
2183	85460649 (4365, 4366)	Novel Protein sim. GBank gi 3873406 gb AAC77482.1 - (U17129) unknown [Rhodococcus erythropolis]		int	29331822, 29331825, 29331826, 56182435, 265011, 264685, 264686, 21906768, 18108370, 264629, 264631, 264636, 264557 29331824, 264907, 66712502, 264757, 265019, 264288, 264692, 56526486
2184	87760690 (4367, 4368)	Novel Protein sim. GBank gi 3114713 (AF061346) - Edp1 protein [Mus musculus]			
2185	87828463 (4369, 4370)	Novel Protein sim. GBank gi 5106956 gb AAD39908.1 AF11361 - (AF113615) FH1/FH2 domain-containing protein FHOS [Homo sapiens]			
2186	87739227 (4371, 4372)	Novel Protein sim. GBank gi 2864625 emb CAA16972 - (AL021811) putative protein [Arabidopsis thaliana]		ATPase-associated	264259, 29331822, 29331824, 29331826, 56182435, 264592, 55812038, 264760, 264766, 55811957, 33657023, 55811576, 56182323, 264563
2187	87388173 (4373, 4374)			UNCLASSIFIED	35696052, 264905, 264906, 264907, 264908, 264510, 264511, 265008, 264910, 264758, 265019, 264782, 264681, 264766, 264769, 35695917, 264692, 35696423, 264631, 264635, 264637, 18108388, 264566, 264486 18108398, 56994075, 264259, 29331824, 29331825, 66714117, 29331827, 264906, 29331830, 265018, 265020, 265021, 56182323, 264559, 22279000, 22279002
2188	87771708 (4375, 4376)	Novel Protein sim. GBank gi 5107816 gb AAD40129.1 AF14941 - (AF149413) contains similarity to histone deacetylases; Pfam PF00850, Score=13.3, E=5e-10, N=1 [Arabidopsis thaliana]		histone	
2189	85693573 (4377, 4378)	Novel Protein sim. GBank gi 3452357 (AF075724) - unknown [Legionella pneumophila]	Contains protein domain (PF01596) - O-methyltransferase		22278996, 264259, 29331826, 21906754, 264369, 264288, 263967

2190	87639197 (4378, 4380)	Novel Protein sim. GBank gi 132575 sp P28315 RINI_RAT - RIBONUCLEASE INHIBITOR		nucleaseinhib	22278996, 22278999, 29331822, 29331824, 29331826, 265008, 264910, 80170831, 55812038, 52644296, 265010, 265018, 264685, 264688, 56181562, 21906769, 35695917, 265022, 60170394, 22279000
2191	95198828 (4381, 4382)	Novel Protein sim. GBank gi 5327002 emb CAB46272.1 - (Y18503) XAP-5-like protein [Homo sapiens]			29331825, 29331826, 29331830, 264510, 264511, 264910, 264593, 264594, 264558, 264559
2192	11126316 (4383, 4384)	Novel Protein sim. GBank gi 462600 sp P34400 MI10_CAEEL - MIG-10 PROTEIN	Contains protein domain (PF00169) - PH domain		264558
2193	94140073 (4385, 4386)	Novel Protein sim. GBank gi 5420389 emb CAB46680.1 - (AJ243460) proteophosphoglycan [Leishmania major]		UNCLASSIFIED	56181686, 29331825, 29331827, 264508, 264909, 265008, 264592, 60432229, 264288, 264684, 264786, 35695917, 33657023, 60431602, 60431528, 55810764, 55811576, 65274791, 35695855, 60431850, 56182323, 60432113
2194	21418714 (4387, 4388)	Novel Protein sim. GBank gi 2773341 (AF040954) - putative protein phosphatase 1 nuclear targeting subunit [Rattus norvegicus]			264592
2195	88083023 (4389, 4390)	Novel Protein sim. GBank gi 2832763 emb CAA15685.1 - (AL009191) /prediction=(method:; /prediction=(method:; /match=(desc:; /match=(desc:; /molif=(desc: [Drosophila melanogaster]		UNCLASSIFIED	22278996, 22278999, 35696052, 265006, 21906754, 265017, 35695917, 265021, 265022, 35695855
2196	95091631 (4391, 4392)	Novel Protein sim. GBank gi 5262487 emb CAB45699.1 - (AL080076) hypothetical protein [Homo sapiens]		collagen	56182575, 35696286, 22278997, 22278999, 264259, 29331822, 66714117, 60432229, 29331827, 35696052, 29331828, 264508, 52644045, 56182435, 264510, 265007, 265008, 265009, 60433438, 55812038, 265010, 265011, 264448, 264288, 264686, 264687, 52644229, 21906765, 21906766, 21906767, 35695917, 265022, 264691, 33657023, 264693, 18108370, 18108376, 35696423, 55811576, 85274791, 35695855, 264636, 56182323, 18108385
2197	95073813 (4393, 4394)	Novel Protein sim. GBank gi 4929567 gb AAD34044.1 AF15180 - (AF151807) CGI-49 protein [Homo sapiens]			264768, 264769, 21906765, 21906766, 21906767, 29148627, 55811957, 35696286, 265020, 22278998, 265021, 264259, 33657023, 264693, 29331824, 35696052, 29331828, 18108370, 35695855, 264113, 265008, 264910, 60432229, 56182323, 33657402, 264758, 83373044, 21906754, 265018, 265019, 22279002, 264482, 264448, 264565, 264288, 264369
2198	88060914 (4395, 4396)	Novel Protein sim. GBank gi 3548787 (AC005622) - R30953_1 [Homo sapiens]		UNCLASSIFIED	

2199	88054355 (4397, 4398)	Novel Protein sim. GBank gij2739372 (AC002505) - hypothetical protein [Arabidopsis thaliana]			264105, 264110, 264112, 264688, 55811957, 33657023, 264692, 263967, 20281071, 56526486
2200	87405385 (4398, 4400)	Novel Protein sim. GBank gij3043634[jdbj]BAA2548[1] - (AB011127) KIAA0555 protein [Homo sapiens]	struct		29331824, 264763, 264768
2201	94316872 (4401, 4402)	Novel Protein sim. GBank gij3913470[spio57314]DHXB_ANAPL - PUTATIVE STEROID DEHYDROGENASE SPM2	Contains protein domain (PF00106) - short chain dehydrogenase	dehydrogenase	29331824, 35696052, 264905, 264907, 33657402, 55811386, 265017, 265018, 265019, 264288, 21906768, 35695917, 265020, 265022, 33657023, 33657109, 27486261, 18108370, 35696423, 35695855, 264555, 264556, 83373044, 87168518, 60432113
2202	91672385 (4403, 4404)	Novel Protein sim. GBank gij5262665[lembj]CAB45767.1[1] - (AL080186) hypothetical protein [Homo sapiens]		UNCLASSIFIED	264489, 264259, 29331824, 60432289, 35696052, 264905, 264909, 264592, 265017, 265018, 265019, 18108351, 264762, 264448, 264369, 264288, 264768, 21906765, 21906766, 264690, 264691, 264692, 33657109, 264634, 264636, 264555, 264639, 264558, 264559, 83373044, 18108385, 264404, 22279002, 264482
2203	87761832 (4405, 4406)	Novel Protein sim. GBank gij1172845[spj]P46629[R825_RABIT - RAS-RELATED PROTEIN RAB-25]	Contains protein domain (PF00071) - Ras family	glycoprotein	52646365, 56994075, 264259, 29331822, 29331826, 29331827, 29331828, 284910, 265010, 265011, 87168559, 265018, 265019, 264605, 264288, 21906769, 35695917, 33657023, 264692, 33657109, 35695763, 18108376, 264638, 22279000, 264566, 264567
2204	88088871 (4407, 4408)	Novel Protein sim. GBank gij121036[spj]P29348[GBT3_RAT GUANINE NUCLEOTIDE-BINDING PROTEIN G(T), ALPHA-3 SUBUNIT (GUSTOUCIN ALPHA-3 CHAIN)]	Contains protein domain (PF00503) - G-protein alpha subunit	UNCLASSIFIED	
2205	94147589 (4409, 4410)	Novel Protein sim. GBank gij4589480[jdbj]BAA78768.1[1] - (AB023141) KIAA0924 protein [Homo sapiens]	Contains protein domain (PF00096) - Zinc finger, C2H2 type	dna_rna_bind	18108394, 18108397, 56182575, 60432049, 264259, 29331822, 29331824, 29331825, 29331826, 29331827, 264806, 265007, 265008, 265009, 60432229, 265010, 265011, 265018, 264683, 264288, 264369, 264686, 21906766, 21906768, 21906769, 264690, 264691, 264693, 18108388, 55811576, 65274791, 264634, 18108381, 18108384, 60432113, 22279002, 264563, 264568, 264591
2206	20620008 (4411, 4412)	Novel Protein sim. GBank gij4557753[rel]NP_000372.1pMID1 - midline 1 protein	Contains protein domain (PF00622) - SPRY domain	UNCLASSIFIED	29331822, 56182181, 29331827, 35696052, 52644045, 265006, 265019, 58181562, 55811957, 265021, 33657023, 35695763, 35695855, 60170394, 60432113, 264566, 264906, 265019, 18108351, 21906769
2207	87787970 (4413, 4414)	Novel Protein sim. GBank gij4557753[rel]NP_000372.1pMID1 - midline 1 protein			264112, 265009, 264691, 18108365, 18108374, 264634, 20281166
2208	86100830 (4415, 4416)	Novel Protein sim. GBank gij3986746 (AF105228) - lutein		struct	
2209	87800420 (4417, 4418)	Novel Protein sim. GBank gij3986746 (AF105228) - lutein [Bos taurus]			

2210	57152407 (4418, 4420)	Novel Protein sim. GBank gi 728837 sp P39194 ALU7_HUMAN - IIII ALU SUBFAMILY SQ WARNING ENTRY IIII		kinase	264603
2211	87341720 (4421, 4422)	Novel Protein sim. GBank gi 728837 sp P39194 ALU7_HUMAN - IIII ALU SUBFAMILY SQ WARNING ENTRY IIII		oncogene	264685, 264686, 18108365, 22279002, 264482
2212	91223924 (4423, 4424)	Novel Protein sim. GBank gi 3776027 emb CAA09214 - (AJ010475) RNA helicase [Arabidopsis thaliana]	Contains protein domain (PF00270) - DEAD/DEAH box helicase	helicase	22278995, 22278997, 22278999, 264092, 264094, 29331822, 66714117, 29331828, 29331828, 264907, 52644045, 265009, 60170831, 21906754, 87188559, 265017, 265019, 18108351, 264683, 18108354, 264369, 264766, 264687, 52644229, 21906765, 21906766, 21906767, 21906768, 265021, 33657109, 18108370, 18108374, 264638, 56182323, 18108384, 18108387, 87188518, 264585
2213	91219309 (4425, 4426)	Novel Protein sim. GBank gi 5420387 emb CAB46679.1 - (AJ243459) proteophosphoglycan [Leishmania major]			56182575, 22278996, 22278997, 35696052, 264905, 66712502, 264908, 264828, 56182435, 264112, 265008, 60431735, 60433438, 21906754, 285010, 265011, 265017, 265018, 265019, 18108351, 264765, 21906765, 21906768, 21906769, 265020, 265021, 264693, 264629, 263974, 263976, 18108379, 55811576, 264556, 264637, 264558, 83373044, 22279002, 264482, 264483

2214	95361453 (4427, 4428)	Novel Protein sim. GBank gij4504325[ref]NP_000173.1lpHADH - hydroxyacyl- Coenzyme A dehydrogenase/3-ketoacyl-Coenzyme A thiolase/enoyl-Coenzyme A hydratase (trifunctional protein), alpha su	Contains protein domain (PF00725) - 3-hydroxyacyl-CoA dehydrogenase	dehydrogenase	264488, 52644507, 18108394, 56182375, 22278994, 22278995, 35698286, 56994075, 22278997, 22278998, 22278999, 264490, 60432049, 264259, 52645080, 29331822, 29147620, 29331824, 66714117, 29331825, 60432289, 29331826, 29331827, 35696052, 29331828, 20281100, 264509, 264907, 66712502, 264908, 29331830, 52644045, 56182435, 264510, 265006, 264511, 264512, 265007, 265008, 265009, 60170831, 264593, 60433356, 60433438, 33109954, 33657084, 52644298, 87188474, 265010, 265011, 87168559, 264601, 265017, 265018, 265019, 18108351, 264448, 264682, 264763, 264288, 264687, 52644229, 264689, 21906765, 21906766, 21906767, 21906768, 21906769, 35695917, 265020, 265021, 265022, 264532, 60170615, 264690, 52644150, 264691, 33657023, 264692, 18108384, 33657109, 33657182, 27486262, 27486264, 27486265, 35695763, 18108370, 264629, 60431528, 18108374, 18108376, 55810764, 35696423, 35695855, 264634, 264636, 52644332, 264638, 264558, 80170394, 18108381, 56182323, 83373044, 18108385, 18108387, 18108388, 56526488, 87168518, 60432113, 22279002, 264482, 264564, 264565, 264566, 264909, 265006, 264555, 264558, 87168518
2215	95418208 (4428, 4430)	Novel Protein sim. GBank gij1947160 (AF000298) - weak similarity to collagens; glycine- and proline-rich [Caenorhabditis elegans]			
2216	87614046 (4431, 4432)	Novel Protein sim. GBank gij1572802 (U70854) - similar to Enterococcus faecalis TRAB (GI:388266) [Caenorhabditis elegans]		UNCLASSIFIED	264693
2217	80589404 (4433, 4434)	Novel Protein sim. GBank gij5031707[ref]NP_005503.1lpGARP - glycoprotein A repetitions predominant	Contains protein domain (PF00560) - Leucine Rich Repeat	glycoprotein	264288, 33657109, 264556
2218	85518254 (4435, 4436)	Novel Protein sim. GBank gij3878636[emb]CAA88953] - (Z49128) similar to cAMP-dependent protein kinase; cDNA EST EMBL: T00719 comes from this gene; cDNA EST yk465d8.3 comes from this gene; cDNA EST yk465d8.5 comes from this gene; cDNA EST yk492/4.3 comes from this gene; cDNA EST y...	Contains protein domain (PF00069) - Eukaryotic protein kinase domain		35696423, 264563
2219	87614048 (4437, 4438)	Novel Protein sim. GBank gij1572802 (U70854) - similar to Enterococcus faecalis TRAB (GI:388266) [Caenorhabditis elegans]	Contains protein domain (PF01963) - TraB family		264682, 264683, 264688, 264689, 264693, 18108370, 18108376

2220	95354165 (4439, 4440)	Novel Protein sim. GBank gi 4507261 ref NP_003145.1 pSTAT - statheir			264488, 18108394, 18108395, 35696286, 264259, 264097, 60432289, 264509, 264905, 264906, 264907, 29331830, 264808, 264909, 264510, 264511, 265007, 264512, 264910, 265009, 264593, 264594, 60433356, 264595, 55812038, 264758, 85658542, 265010, 264601, 264603, 265019, 264605, 264760, 264762, 264448, 264764, 264369, 264766, 18108357, 264768, 264687, 18108358, 264769, 55811957, 264690, 264691, 33657023, 264692, 18108362, 18108368, 264638, 264629, 18108374, 263978, 264634, 264635, 264636, 264637, 264638, 18108385, 264483, 264566, 264486, 264567
2221	88060927 (4441, 4442)	Novel Protein sim. GBank gi 3549154 (AC005625) - R27328_1 [Homo sapiens]			
2222	84425892 (4443, 4444)			UNCLASSIFIED	264908, 265020, 35695855
2223	95091649 (4445, 4446)			UNCLASSIFIED	265010, 264685, 264690, 264693, 264628, 263974, 263976, 55811576, 264555, 264638, 83373044, 264483
2224	87388515 (4447, 4448)	Novel Protein sim. GBank gi 3876005 emb CAA84789 - (Z35719) cDNA EST EMBL:D87419 comes from this gene; cDNA EST EMBL:C13853 comes from this gene; cDNA EST EMBL:C11578 comes from this gene; cDNA EST yk234a7.3 comes from this gene; cDNA EST yk234a7.5 comes from this gene; cDNA ES...	Contains protein domain (PF01958) - Domain of unknown function	UNCLASSIFIED	264259, 264509, 56182435, 265006, 265008, 265009, 264757, 21906754, 18108351, 264693, 18108374, 18108385
2225	85749484 (4449, 4450)	Novel Protein sim. GBank gi 1255847 (U53336) - C05E11.1 gene product [Caenorhabditis elegans]	transport		22278994, 22278995, 22278999, 52644045, 264600, 265019, 21906785, 21906789
2226	86978953 (4451, 4452)	Novel Protein sim. GBank gi 4826524 emb CAB42852.1 - (AL049848) hypothetical protein [Homo sapiens]			264259, 29331822, 29331824, 29331825, 29331827, 264508, 264908, 265007, 264691, 264634, 264486
2227	87721135 (4453, 4454)			UNCLASSIFIED	22278999, 265006, 265008, 18108354, 29148629, 29148784, 27486261, 18108374, 264637, 18108384
2228	91227337 (4455, 4456)	Novel Protein sim. GBank gi 608976 (U16800) - ribonucleoprotein [Xenopus laevis]	Contains protein domain (PF00076) - RNA recognition motif (a.k.a. RRM, RBD, or RNP domain)	dna_ma_bind	264091, 264092, 264094, 29331822, 29331825, 68714117, 264693, 263972, 264639, 83373044, 264583
2229	88060931 (4457, 4458)	Novel Protein sim. GBank gi 3549155 (AC005625) - R27328_2 [Homo sapiens]		UNCLASSIFIED	

2230	95342915 (4459, 4460)	Novel Protein sim. GBank gij226154 prj 1412350A - DNA polymerase [Human adenovirus type 2]		UNCLASSIFIED	264488, 264768, 52644507, 264769, 21906765, 21906766, 21906767, 21906769, 22278995, 35695917, 22278998, 22278997, 22278998, 22278999, 265021, 264259, 52645129, 29331827, 264508, 264509, 264907, 18108370, 18108374, 35696423, 35695855, 265007, 264910, 264555, 33657402, 21906754, 18108387, 265010, 265018, 265019, 264760, 264288, 264567, 264563
2231	88060937 (4461, 4462)	Novel Protein sim. GBank gij3549154 (AC005625) - R27328.1 [Homo sapiens]		UNCLASSIFIED	
2232	87762581 (4463, 4464)	Novel Protein sim. GBank gij5281316 gb AAD41476.1 AF133124 - transcription factor IIC63 [Homo sapiens]		transcript factor	18108394, 56182575, 22278995, 35695286, 22278997, 22278999, 264259, 29331827, 35696052, 264907, 56182435, 265006, 265007, 265008, 264910, 264758, 55812038, 264603, 265018, 265019, 18108351, 264682, 264764, 264683, 264369, 264288, 264686, 264687, 264689, 21906765, 21906768, 21906767, 21906769, 29148629, 35695917, 264690, 52644150, 264691, 33657023, 264693, 18108370, 18108374, 55811576, 35695855, 264639, 18108385, 264564, 264908, 33657402, 265018, 264288, 264686, 265020, 264635, 18108385
2233	87755292 (4465, 4466)	Novel Protein sim. GBank gij4249733 gb AAD13780j - (AF109377) [Mus musculus]			
2234	87771817 (4467, 4468)	Novel Protein sim. GBank gij1706559 sp P54352 EAS_DROME - ETHANOLAMINE KINASE (EASILY SHOCKED PROTEIN)		kinase	56182435, 264369, 264688, 21906765, 265020, 264693, 264556, 56526486
2235	91012318 (4469, 4470)	Novel Protein sim. GBank gij4872734 gb AAD34762.1j - (AF132174) unknown [Drosophila melanogaster]	Contains protein domain (PF00400) - WD domain, G-beta repeat	UNCLASSIFIED	22278997, 264563
2236	88003131 (4471, 4472)	Novel Protein sim. GBank gij1082675 prj B53814 - p20 protein - human	Contains protein domain (PF00011) - eph Hsp20/alpha crystallin family		264569, 264687, 264769, 265022, 264259, 60432049, 264691, 29331826, 60432289, 20281149, 264906, 264907, 264511, 265008, 265009, 264634, 264635, 264636, 264555, 264556, 264557, 264558, 60433358, 264595, 284559, 60433438, 60432113, 264761, 264762, 264763, 264764
2237	91012318 (4473, 4474)	Novel Protein sim. GBank gij4972734 gb AAD34762.1j - (AF132174) unknown [Drosophila melanogaster]	Contains protein domain (PF00400) - WD domain, G-beta repeat	kinase	264488, 264769, 21906765, 21906766, 21908767, 21908768, 21906769, 22278995, 22278996, 22278997, 22278998, 265020, 265021, 22278999, 264259, 29331824, 29331826, 29331827, 35695763, 18108376, 35695855, 265007, 60432229, 33657402, 60433358, 60433438, 83373044, 18108385, 21908754, 18108387, 60432113, 22279000, 265019, 22279002, 264482, 18108351, 264288

2238	94998857 (4475, 4476)		Contains protein domain (PF00286) - Viral coat protein		264509, 264907, 264629, 264634, 264564
2239	87798688 (4477, 4478)				29331825, 265009, 264369, 33657109, 18108370, 18108374, 264557, 264559, 264488, 65274572, 56182575, 35698286, 22278997, 22278999, 264259, 29331827, 35698052, 264508, 52644045, 56182435, 264511, 265007, 265008, 265009, 60433356, 60433438, 55812038, 21906754, 33657084, 55811386, 265018, 265019, 18108351, 264683, 264288, 264768, 264687, 264688, 264769, 21906765, 21906768, 21906769, 35695917, 265021, 265022, 60170615, 52644150, 33657023, 33657182, 33657349, 35695763, 18108370, 35696423, 35695855, 87168518, 22279000
2241	80091951 (4481, 4482)			UNCLASSIFIED	264683, 264629
2242	91228075 (4483, 4484)	Novel Protein sim. GBank gij2494312 sp P70541 E2BG_RAT - TRANSLATION INITIATION FACTOR EIF-2B GAMMA SUBUNIT (EIF-2B GDP-GTP EXCHANGE FACTOR)		synthase	22278995, 22278996, 22278997, 22278998, 264259, 29331822, 29331824, 29331826, 29331827, 29331828, 264509, 265007, 265008, 264596, 21906754, 265010, 265011, 265017, 265018, 265019, 264448, 264369, 264288, 52644229, 21906765, 21906766, 21906767, 21906768, 21906769, 265020, 265021, 33657109, 27486262, 27486264, 18108374, 35695855, 264634, 264637, 56182323, 83373044, 56526486, 87168518, 264564
2243	78902026 (4485, 4486)			UNCLASSIFIED	265008
2244	85723527 (4487, 4488)	Novel Protein sim. GBank gij2291143 (AF016417) - Similar to BZIP transcription factor [Caenorhabditis elegans]		UNCLASSIFIED	264604
2245	95318545 (4489, 4490)	Novel Protein sim. GBank gij470340 (U00043) - similar to beta-mannosyltransferase [Caenorhabditis elegans]	Contains protein domain (PF00534) - Glycosyl transferases group 1	UNCLASSIFIED	52645156, 22278995, 22278996, 22278997, 22278999, 29331822, 29331824, 29331827, 264907, 264512, 60433438, 264758, 21906754, 265011, 264603, 264764, 264687, 21906767, 21906768, 21906769, 55811957, 265022, 264691, 264629, 35696423, 264638, 18108387, 60432113, 22279000, 22279002, 264566

2246	94848710 (4491, 4492)	Novel Protein sim. GBank gij4996096[dbj BAA78326.1] - (AB028088) activator of S phase Kinase [Homo sapiens]	Contains protein domain (PF00153) - transport Mitochondrial carrier proteins	65274572, 22278995, 35696286, 22278996, 22278997, 22278999, 264259, 35696032, 264106, 264905, 264907, 265008, 265007, 265008, 60433438, 33109954, 87168559, 265018, 265019, 264288, 21906765, 21906767, 21906768, 21906769, 55811957, 35695917, 265020, 265022, 27486284, 18108370, 18108374, 65274791, 35695855, 60432113
2247	87862542 (4493, 4494)	Novel Protein sim. GBank gij854065[emb CAA58337] - (X83413) U88 [Human herpesvirus 6]	UNCLASSIFIED	52645156, 52646385, 52646080, 35696052, 33656970, 52648317, 33657084, 265017, 21906768, 21906769, 35695917, 33657109, 52645129, 33657182, 27486281, 27486282, 33657349, 27486285, 18108387
2248	85412986 (4495, 4496)	Novel Protein sim. GBank gij4758502[ref NP_004123.1]pHABP - hyaluronan-binding protein 2	Contains protein domain (PF00089) - Trypsin	264488, 264259, 264907, 29331830, 264909, 265007, 265009, 264595, 21908754, 65274444, 264603, 265019, 264762, 264448, 264288, 264689, 21908766, 55811957, 265021, 264691, 18108374, 264634, 264635, 264636, 264555, 264638, 264557, 264558, 264559, 18108383, 83373044, 18108385, 264486
2249	94685662 (4497, 4498)	Novel Protein sim. GBank gij4038461 (AF107772) - TcSt11 [Trypanosoma cruzi]	Contains protein domain (PF00515) - eph TPR Domain	264766, 264628, 264636, 264637
2250	79827508 (4499, 4500)	Novel Protein sim. GBank gij3738140[emb CAA21241] - (AL031852) valyl-tRNA synthetase, mitochondrial precursor [Schizosaccharomyces pombe]	UNCLASSIFIED	264908, 18108374
2251	87385863 (4501, 4502)	Novel Protein sim. GBank gij3218467[emb CAA07090.1] - (AJ006529) putative phosphatase [Gallus gallus]	UNCLASSIFIED	264259, 35696052, 264508, 56182435, 265009, 264592, 264593, 264760, 264448, 264684, 264288, 264690, 264628, 55811576, 264555, 264556, 264557, 264558, 264559, 264566
2252	87735867 (4503, 4504)	Novel Protein sim. GBank gij4929325[gb AAD33953.1]AF14531 - (AF145316) vacuolar ATP synthase subunit D proton pump delta polypeptide [Homo sapiens]	synthase	264092, 264094, 264259, 29331822, 66714117, 29331828, 264102, 264103, 264104, 264105, 264109, 264112, 264511, 265007, 60433356, 265010, 18108351, 21906767, 21906768, 264691, 263974, 263977, 264486, 264587
2253	91010703 (4505, 4506)		UNCLASSIFIED	65274572, 265019

2254	95320031 (4507, 4508)	Novel Protein sim. GBank gij4502847[refNP_001271.1]pCIRB - cold inducible RNA- binding protein	Contains protein domain (PF00076) - RNA recognition motif (a.k.a. RRM, RBD, or RNP domain)	dna_rna_bind	254569, 18108394, 18108398, 56182575, 59994075, 35698286, 22278999, 264094, 60432049, 264259, 29331822, 29331824, 29331825, 29331826, 60432289, 29331827, 29331828, 35696052, 264106, 264508, 264509, 264806, 264907, 29331830, 66712502, 264908, 264909, 264510, 265006, 264511, 265007, 265008, 265009, 60170831, 60432229, 60433358, 60433438, 264758, 85658542, 265010, 265011, 87168559, 265017, 265018, 265019, 264448, 264764, 264288, 264369, 264766, 264686, 264768, 264769, 21906765, 21906767, 55811957, 264691, 33657023, 264692, 18108362, 65274620, 263969, 264628, 18108370, 60431528, 263972, 264629, 18108372, 18108377, 18108379, 55811576, 35696423, 35695855, 264630, 264634, 264635, 264636, 264558, 263981, 264638, 56182323, 60170394, 264558, 18108381, 18108382, 83373044, 18108385, 87168518, 60432113, 22279002, 264482, 264564, 264565, 264486, 264587, 18108391
2255	81010546 (4509, 4510)	Novel Protein sim. GBank gij5541865[emb CA851072.1] - (AL096858) hypothetical protein [Homo sapiens]	Contains protein domain (PF00076) - RNA recognition motif (a.k.a. RRM, RBD, or RNP domain)	struct	65274572, 56182575, 22278997, 22278999, 264259, 29331822, 29331825, 29331826, 29331827, 29331828, 264508, 264905, 264906, 264907, 66712502, 264908, 58182435, 264510, 264511, 265008, 264593, 264595, 21906754, 33109954, 87168474, 265011, 265017, 265019, 264682, 264764, 264369, 264288, 264768, 264685, 264686, 264768, 21906765, 21906766, 21906768, 21906769, 265020, 60170615, 52844150, 264690, 264692, 264693, 33657109, 33657349, 264632, 264638, 52644332, 56182323, 22279000, 22279002
2256	87020531 (4511, 4512)	Novel Protein sim. GBank gij3327174[dbj BAA31655] - (AB014580) KIAA0680 protein [Homo sapiens]		UNCLASSIFIED	264768, 264689, 18108374
2257	80088235 (4513, 4514)			UNCLASSIFIED	22278996, 22278999, 264681, 21906765, 21906766, 264567
2258	88090516 (4515, 4516)	Novel Protein sim. GBank gij3025446 (AC004528) - R32184_2 [Homo sapiens]	Contains protein domain (PF00060) - Ligand-gated ion channel	misc_channel	264908, 264592, 264764

2259	95364155 (4517, 4518)	Novel Protein sim. GBank gi 4884140 emb CAB43278.1 - (AL050110) hypothetical protein (Homo sapiens)		UNCLASSIFIED	18108396, 65274572, 56182575, 22278997, 22278998, 264259, 29331822, 29331827, 264905, 66712502, 264908, 264909, 56182435, 265007, 265008, 60432229, 33657084, 87168559, 18108351, 264448, 264683, 264288, 264369, 56181562, 265021, 60170615, 264890, 33657109, 60431528, 18108374, 52644332, 56182323, 18108385, 22279000, 22279002, 264482
2260	88084119 (4519, 4520)	Novel Protein sim. GBank gi 3080663 (AC004614) - similar to I-spondin proteins AB008086 (PID:g2529225) [Homo sapiens]	Contains protein domain (PF00090) - oxidase Thrombospondin type 1 domain		56182575, 265020, 264905, 264906, 264908, 35696423, 264511, 264635, 55812038, 264758, 265018, 265019, 264605, 264760, 264583
2261	88074157 (4521, 4522)	Novel Protein sim. GBank gi 3334526 emb CAA16138 - (AL021306) predicted using FGENEH [Homo sapiens]	UNCLASSIFIED		
2262	91639292 (4523, 4524)	Novel Protein sim. GBank gi 4877759 gb AAD31421.1 AF12444 - (AF124440) MAGE tumor antigen D1 [Homo sapiens]			56182575, 22278999, 29331822, 29331825, 60432289, 29331827, 35696052, 264508, 66712502, 52644045, 56182435, 265008, 265008, 265009, 60433356, 55812038, 265010, 265017, 265019, 264288, 264369, 21906765, 21906767, 55811957, 35695917, 52644150, 33657023, 33657109, 55811576, 65274791, 56182323
2263	87602495 (4525, 4526)	Novel Protein sim. GBank gi 3341697 (AC003672) - hypothetical protein [Arabidopsis thaliana]			22278994, 22278997, 264907, 264828, 52644150, 18108381, 264693, 18108374
2264	87756525 (4527, 4528)	Novel Protein sim. GBank gi 1657601 (U66220) - unknown [Nannocystis exedens]	UNCLASSIFIED		264686, 264488, 264768, 264769, 264691, 264508, 264905, 264509, 264906, 264907, 264908, 264909, 35695855, 264510, 264511, 264512, 265007, 265009, 264638, 264639, 264757, 264758, 18108385, 265011, 264760, 264584, 264565, 264764, 264566, 264486, 264766
2265	86918663 (4529, 4530)	Novel Protein sim. GBank gi 477072 pir A48018 - mucin 7 precursor, salivary - human	Contains protein domain (PF00096) - Zinc finger, C2H2 type	UNCLASSIFIED	264689, 264910, 264764
2266	87773458 (4531, 4532)	Novel Protein sim. GBank gi 3150479 (AF067212) - partial CDS [Caenorhabditis elegans]	Contains protein domain (PF01305) - Ribosomal protein L15 amino terminal region		22278995, 22278997, 22278999, 264259, 265008, 265007, 265009, 60433438, 21906754, 265010, 265011, 265017, 264448, 264683, 264288, 264689, 21906765, 21906768, 35695917, 265021, 18108374, 264638, 22279000, 22279002, 264566, 264487

2267	87395838 (4533, 4534)	Novel Protein sim. GBank gjl3560229[emb]CAA20697.1]- (AL031530) hypothetical protein [Schizosaccharomyces pombe]		UNCLASSIFIED	35686286, 264259, 29331824, 29331825, 35696052, 29331828, 264905, 264509, 264907, 264908, 264909, 264512, 265009, 264910, 264593, 33657402, 265010, 265018, 264762, 264448, 264288, 264369, 264768, 52844229, 35695917, 264691, 33657023, 18108382, 33657108, 35696423, 264634, 18108381, 87188518, 264568
2268	85693867 (4535, 4538)	Novel Protein sim. GBank gjl728832[sp]P39189[ALU2_HUMAN - IIII ALU SUBFAMILY SB WARNING ENTRY IIII	cadherin		264488, 264259, 264509, 264595, 265010, 265017, 264766, 18108385, 264488
2269	88177877 (4537, 4538)	Novel Protein sim. GBank gjl103418[pr][S17885 - Tcd37 protein - fruit fly (Drosophila melanogaster)	UNCLASSIFIED		56182575, 60432049, 265007, 265009, 264591, 87188559, 264605, 18108351, 21906764, 265020, 264629, 60431528, 264638, 18108385, 18108387, 60432113
2270	80410327 (4539, 4540)				264763
2271	91010392 (4541, 4542)		cyl450		264909, 56182435, 265008, 55812038, 55811957, 33657023, 264693, 33657109, 55810764, 55811576, 56182323
2272	84208220 (4543, 4544)		UNCLASSIFIED		264905, 264908
2273	95014271 (4545, 4546)	Novel Protein sim. GBank gjl4176370 (AC005058) - similar to calcium-independent phospholipase A2; similar to AC004392 (PID:g3367519) [Homo sapiens]	Contains protein domain (PF00462) - Glutaredoxin		52645156, 22278996, 22278999, 60432049, 264259, 29331822, 29331824, 29331825, 29331826, 29331827, 35696052, 264909, 265006, 264593, 60433438, 21906754, 265018, 264689, 21906765, 21906766, 21906767, 21906769, 265021, 265022, 60170815, 264691, 33657023, 264693, 33657109, 27486264, 18108376, 35696423, 35695855, 264630, 52644332, 264558, 56182323, 22279002
2274	91640217 (4547, 4548)	Novel Protein sim. GBank gjl1480112[emb]CAA67961] - (X99842) HP1-BP74 protein [Mus musculus]	Contains protein domain (PF00538) - linker histone H1 and H5 family	histone	52645156, 22278997, 22278999, 52645080, 29331824, 29331825, 29331826, 29331827, 29331828, 264905, 264908, 52644045, 264511, 265008, 265009, 60170831, 264591, 21906754, 33109954, 265011, 265018, 18108351, 264448, 264288, 264684, 264766, 21906765, 21906766, 21906767, 21906768, 52644150, 264693, 18108384, 35695763, 18108374, 35696423, 264634, 264557, 264638, 52644332, 83373044, 18108385, 56526486, 87168518, 22279002
2275	88082501 (4549, 4550)	Novel Protein sim. GBank gjl3165406 (AC004755) - fos37502_2 [Homo sapiens]	Contains protein domain (PF00122) - E1-E2 ATPase	transport	
2276	11287447 (4551, 4552)		UNCLASSIFIED		264555, 264558

2277	58084123 (4553, 4554)	Novel Protein sim. GBank gij2880079 (AC004142) - similar to murine leucine-rich repeat protein; possible role in neural development by protein-protein interactions; 93% similarity to D49802 (PID:g1369906) [Homo sapiens]	Contains protein domain (PF00560) - Leucine Rich Repeat	glycoprotein	22278999, 35696052, 265008, 265019, 264368, 265020, 265022, 55810764, 264404, 22279002
2278	94133078 (4555, 4556)	Novel Protein sim. GBank gij2618702 (AC002510) - unknown protein [Arabidopsis thaliana]		UNCLASSIFIED	18108394, 22278997, 29331826, 60433356, 60433438, 21906754, 265018, 33657023, 264639, 83373044, 264565
2279	80419375 (4557, 4558)	Novel Protein sim. GBank gij119714sp139831EXTN_TOBAC - EXTENSIN PRECURSOR (CELL WALL HYDROXYPROLINE-RICH GLYCOPROTEIN)		UNCLASSIFIED	264766, 264565
2280	94239723 (4559, 4560)				
2281	95293048 (4561, 4562)	Novel Protein sim. GBank gij4240299dbjBAA74928.11 - (AB020712) KIAA0905 protein [Homo sapiens]	Contains protein domain (PF00400) - WD domain, G-beta repeat	transport	265008, 33108954, 265010, 265019, 265020, 264092, 264259, 29331822, 29331824, 29331826, 35696052, 264107, 264908, 264909, 52644045, 265006, 33657402, 60433356, 264758, 265011, 265019, 264681, 264683, 264684, 264686, 21906765, 21906767, 21906768, 21906769, 60170615, 264690, 52644150, 18108362, 264692, 18108368, 18108374, 263978, 264631, 18108381, 264559, 18108385, 56526486, 22279000, 264566, 264567
2282	87602829 (4563, 4564)	Novel Protein sim. GBank gij1537070 (U63840) - nucleoporin p54 [Rattus norvegicus]		UNCLASSIFIED	264488, 264259, 29331822, 29331824, 29331827, 29331828, 29331830, 33657402, 60433438, 87168474, 265019, 18108351, 21906767, 21906769, 55811957, 33657023, 52645129, 33657109, 33657182, 27486262, 263972, 55811576, 87168516, 20281169
2283	95362386 (4565, 4566)	Novel Protein sim. GBank gij2495729sp1Q92556Y281_HUMAN - HYPOTHETICAL PROTEIN KIAA0281 (HA6725)		UNCLASSIFIED	60424179, 56182575, 22278994, 35696286, 22278997, 22278999, 29331822, 29331824, 56182181, 29331825, 29331827, 35696052, 29146499, 264905, 66712502, 264908, 265007, 265009, 60432229, 264593, 60431735, 60433356, 33108954, 33657084, 55811386, 87168474, 265010, 265011, 265018, 265019, 5581150, 264683, 264369, 264288, 264688, 21906765, 21906767, 21906768, 29148827, 21906769, 55811957, 265020, 265022, 33657182, 27486261, 18108370, 264628, 18108374, 55810764, 18108379, 55811576, 35696423, 35695855, 264630, 60431850, 263981, 18108382, 83373044, 18108385, 18108387, 60432113, 22279000, 264482, 264567

2284	85414855 (4567, 4568)	Novel Protein sim. GBank gi 2498797 sp Q64311 PNAD_MOUSE - PROTEIN N- TERMINAL ASPARAGINE AMIDOHYDROLASE (PROTEIN NH2-TERMINAL ASPARAGINE DEAMIDASE) (NTN- AMIDASE) (PNAD) (PROTEIN NH2-TERMINAL ASPARAGINE AMIDOHYDROLASE) (PNA)			60424178, 52644507, 18108394, 52646842, 22278994, 35698286, 22278998, 22278997, 22278999, 264259, 60432049, 29331822, 29331824, 29331825, 60432289, 29331826, 29331827, 35696052, 29331830, 52644045, 56182435, 33657402, 60433438, 33109954, 21906754, 85658542, 87188559, 265018, 265019, 55811150, 264682, 264389, 21906765, 21906766, 21906767, 21906768, 21906769, 55811957, 35695917, 265020, 265021, 60170615, 33657023, 33657182, 27486262, 27486264, 27486265, 18108376, 55810764, 35696423, 35695855, 60431850, 87188518, 60432113, 264482, 264564 264512, 265009, 264910, 264595, 264760, 18108351, 264682, 264763, 264685, 264766, 264686, 264768, 264693, 264629, 35695855, 264631, 264634
2285	87781484 (4569, 4570)	Novel Protein sim. GBank gi 3342234 (U93909) - nuclear antigen EBNA-1 [Cercopithecine herpesvirus 15]	collagen		35696052, 264905, 264907, 264808, 264909, 264512, 265009, 264910, 264595, 264760, 18108351, 264682, 264763, 264685, 264766, 264686, 264768, 264693, 264629, 35695855, 264631, 264634
2286	87737825 (4571, 4572)	Novel Protein sim. GBank gi 3873414 (U00043) - similar to D. melanogaster trithorax protein [Caenorhabditis elegans]	kinase		35696286, 56182435, 60170831, 264591, 60432229, 264592, 264593, 264594, 264595, 55812038, 264596, 87188474, 35695917, 264692, 55811576, 264555, 264557 264692
2287	82986696 (4573, 4574)	Novel Protein sim. GBank gi 630905 pir S42731 - collagen alpha 1 chain - sea urchin (Hemicentrotus pulcherrimus) (fragment)	UNCLASSIFIED	Contains protein domain (PF01391) - Collagen triple helix repeat (20 copies)	
2288	94133083 (4575, 4576)	Novel Protein sim. GBank gi 728832 sp P39189 ALU2_HUMAN - !!!!! ALU SUBFAMILY SB WARNING ENTRY !!!!!	lm7		22278995, 56994075, 22278997, 22278999, 264259, 60432289, 264508, 264512, 265008, 33657402, 265017, 265018, 265019, 18108351, 264448, 21906765, 21906766, 21906767, 21906768, 33657023, 264557, 22279000, 22279002
2289	88084133 (4577, 4578)	Novel Protein sim. GBank gi 2887497 (AC004144) - R34001_1 [Homo sapiens]	kinase	Contains protein domain (PF00400) - WD domain, G-beta repeat	
2290	88084137 (4579, 4580)	Novel Protein sim. GBank gi 2887497 (AC004144) - R34001_1 [Homo sapiens]	UNCLASSIFIED	Contains protein domain (PF00400) - WD domain, G-beta repeat	264683
2291	84295281 (4581, 4582)	Novel Protein sim. GBank gi 3253120 (AC005175) - R31449_3 [Homo sapiens]	struc1		18108394, 264907, 265006, 265008, 33109954, 52646317, 265010, 18108351, 264681, 264686, 264692, 18108370, 18108374, 18108385

2292	94328834 (4583, 4584)	Novel Protein sim. GBank gij4803672[embjCAB42643.1] - (AJ133769) nuclear transport receptor [Homo sapiens]		UNCLASSIFIED	56182575, 35696286, 56994075, 29331824, 29331825, 35696052, 56182435, 60433438, 55812038, 33109954, 87168474, 87168559, 265018, 18108351, 264763, 264448, 264369, 264288, 58181562, 264769, 21906765, 21906766, 21906767, 21906769, 265021, 265022, 33657023, 264693, 65274620, 33657109, 27486264, 264629, 55810764, 55811578, 35695855, 56182323, 56526486, 87168518, 22279000, 264587
2293	87759213 (4585, 4586)	Novel Protein sim. GBank gij3252981 (AF068921) - Ras-binding protein SUR-8 [Mus musculus]	Contains protein domain (PF00560) - Leucine Rich Repeat	struct	264488, 18108397, 35696286, 264092, 264259, 29331822, 29331826, 264906, 264908, 264511, 264512, 265009, 264910, 18108351, 264764, 264369, 264288, 264685, 264766, 265020, 265022, 264534, 35696423, 264631, 264637, 18108381, 56182323, 264639, 18108385, 264404, 284563, 284565, 22278997, 22278998, 22278999, 264259, 29331822, 60432289, 29331828, 35696052, 265018, 264684, 264288, 264686, 21906765, 21906766, 21906767, 21906768, 21906769, 265020, 265021, 264692, 33657109, 18108376, 35696423, 35695855, 264634, 22279000, 22279002, 264563, 264486, 22278996, 60432289, 264682, 264683, 264689, 18108374, 263974, 263978
2294	86693560 (4587, 4588)	Novel Protein sim. GBank gij2062680 (U88964) - HEM45 [Homo sapiens]	Contains protein domain (PF00929) - Exonuclease	nuclease	264488, 65274572, 56182575, 22278997, 22278999, 264259, 29331822, 29331824, 29331826, 29331828, 35696052, 264907, 264908, 52644045, 56182435, 264112, 265006, 265007, 264910, 265009, 60433356, 33657402, 264595, 55812038, 21906754, 265011, 265018, 265019, 264448, 264764, 264288, 264766, 21906765, 21906767, 21906768, 21906769, 55811957, 265020, 265021, 264690, 264691, 33657023, 264692, 264693, 33657109, 55811578, 56182323, 60170394, 83373044, 18108385, 56526486, 264564, 264486
2295	95312200 (4589, 4590)			UNCLASSIFIED	264488, 65274572, 56182575, 22278997, 22278999, 264259, 29331822, 29331824, 29331826, 29331828, 35696052, 264907, 264908, 52644045, 56182435, 264112, 265006, 265007, 264910, 265009, 60433356, 33657402, 264595, 55812038, 21906754, 265011, 265018, 265019, 264448, 264764, 264288, 264766, 21906765, 21906767, 21906768, 21906769, 55811957, 265020, 265021, 264690, 264691, 33657023, 264692, 264693, 33657109, 55811578, 56182323, 60170394, 83373044, 18108385, 56526486, 264564, 264486
2296	80030781 (4591, 4592)			transcriptfactor	264488, 65274572, 56182575, 22278997, 22278999, 264259, 29331822, 29331824, 29331826, 29331828, 35696052, 264907, 264908, 52644045, 56182435, 264112, 265006, 265007, 264910, 265009, 60433356, 33657402, 264595, 55812038, 21906754, 265011, 265018, 265019, 264448, 264764, 264288, 264766, 21906765, 21906767, 21906768, 21906769, 55811957, 265020, 265021, 264690, 264691, 33657023, 264692, 264693, 33657109, 55811578, 56182323, 60170394, 83373044, 18108385, 56526486, 264564, 264486
2297	94321251 (4593, 4594)	Novel Protein sim. GBank gij5689501[dbjBAA83034.1] - (AB029005) KIAA1082 protein [Homo sapiens]			264488, 65274572, 56182575, 22278997, 22278999, 264259, 29331822, 29331824, 29331826, 29331828, 35696052, 264907, 264908, 52644045, 56182435, 264112, 265006, 265007, 264910, 265009, 60433356, 33657402, 264595, 55812038, 21906754, 265011, 265018, 265019, 264448, 264764, 264288, 264766, 21906765, 21906767, 21906768, 21906769, 55811957, 265020, 265021, 264690, 264691, 33657023, 264692, 264693, 33657109, 55811578, 56182323, 60170394, 83373044, 18108385, 56526486, 264564, 264486

2298	95312207 (4585, 4586)	Novel Protein sim. GBank gij3875051[emb]CAB02849] - (Z81050) predicted using GeneFinder; similar to collagen; cDNA EST EMBL:D65564 comes from this gene; cDNA EST EMBL:D69046 comes from this gene; cDNA EST yk366b12.3 comes from this gene; cDNA EST yk366b12.5 comes from this gene ...		collagen	60424179, 56181686, 22278995, 35696286, 22278996, 22278998, 22278999, 264490, 264259, 29331822, 29331824, 66714117, 60424269, 35696052, 29331828, 66712502, 56182435, 264510, 265008, 60433438, 21906754, 33109954, 55811386, 265010, 265018, 55811150, 264762, 18108351, 264682, 264683, 264288, 264684, 264686, 264688, 56181562, 264689, 21906766, 21906767, 29148629, 55811957, 29148784, 35695917, 265020, 18108362, 33657023, 18108364, 33657109, 60431602, 18108370, 60431528, 18108374, 55810764, 35696423, 35695855, 264630, 264634, 60431850, 18108380, 56182323, 264558, 83373044, 18108385, 60432113, 22279000, 264482, 264567, 264486
2299	80193720 (4597, 4598)			UNCLASSIFIED	264369
2300	94124346 (4599, 4600)	Novel Protein sim. GBank gij2443886 (AC002284) - Unknown protein [Arabidopsis thaliana]			264488, 22278998, 22278999, 264259, 29331824, 66714117, 35696052, 264509, 264905, 264906, 264907, 264908, 264909, 265008, 264910, 265009, 264758, 265010, 87168559, 264600, 265018, 264760, 264762, 18108351, 264764, 264766, 264768, 264769, 21906768, 21906767, 35695917, 265021, 264691, 33657023, 35695763, 18108370, 264691, 33657023, 35695763, 18108370, 18108374, 35696423, 35695855, 264631, 264636, 264638, 18108385, 22279002, 264563
2301	91235725 (4601, 4602)	Novel Protein sim. GBank gij2143637[pir]j84505 - calcium-dependent actin-binding protein - rat		struct	264908, 264758, 265017, 21906765, 83373044, 264563
2302	88084141 (4603, 4604)	Novel Protein sim. GBank gij2887497 (AC004144) - R34001.1 [Homo sapiens]		UNCLASSIFIED	52644045, 265019, 264288, 33657023, 18108370, 18108385
2303	94141439 (4605, 4606)	Novel Protein sim. GBank gij4884194[emb]CAB43220.1] - (AL049946) hypothetical protein [Homo sapiens]	Contains protein domain (PF00047) - Immunoglobulin domain	struct	264259, 60432049, 264907, 264909, 264910, 60432229, 33657402, 265011, 265018, 264762, 264448, 264769, 264637, 264638, 83373044, 264486
2304	94840434 (4607, 4608)	Novel Protein sim. GBank gij2494182[sp]Q10005[YRY1_CAEEL - HYPOTHETICAL 39.9 KD PROTEIN T15H9.1 IN CHROMOSOME II PRECURSOR		UNCLASSIFIED	264259, 29331824, 21906767, 33657182, 33657349
2305	90935911 (4609, 4610)	Novel Protein sim. GBank gij4872686[gib]AAD34738.1] - (AF132150) unknown [Drosophila melanogaster]			65274572, 22278996, 264908, 265006, 21906769, 264691, 264486

2306	95334940 (4611, 4612)	Novel Protein sim. GBank gi 4929585 gb AAD34043.1 AF15180 - (AF15180) CGI-48 protein [Homo sapiens]	Contains protein domain (PF00400) - WD domain, G-beta repeat	kinasereceptor	264488, 22278995, 22278996, 35696286, 22278997, 22278998, 22278999, 264259, 29331822, 29331824, 29331825, 29331826, 29331827, 29331828, 35696052, 264508, 264905, 264907, 29331830, 264908, 264909, 264510, 265006, 264511, 265007, 264512, 265008, 265009, 33657402, 21906754, 8568542, 265010, 265011, 264601, 265017, 265018, 264604, 265019, 18108351, 264448, 264288, 264766, 264768, 21906765, 21906766, 21906767, 21906768, 29148629, 29148784, 35695917, 265020, 265021, 265022, 33657023, 264692, 18108370, 18108374, 18108376, 35696423, 35695855, 264630, 264634, 264635, 264636, 264837, 264638, 264639, 18108382, 18108385, 18108387, 264563, 264566, 264486
2307	79415283 (4613, 4614)			UNCLASSIFIED	264828
2308	87608408 (4615, 4616)	Novel Protein sim. GBank gi 4758732 ref NP_004522.1 pMOCS - molybdenum cofactor synthesis 2		synthase	35696286, 264259, 29331822, 29331824, 264112, 264512, 264757, 21908754, 264288, 264690, 27486264, 264631, 264634, 264404
2309	95337218 (4617, 4618)	Novel Protein sim. GBank gi 3878059 emb CAB17070 - (Z98942) cDNA EST EMBL:D73444 comes from this gene; cDNA EST EMBL:D70905 comes from this gene; cDNA EST EMBL:D72208 comes from this gene; cDNA EST EMBL:D75030 comes from this gene; cDNA EST EMBL:D72944 comes from this gene; cDN...		glycoprotein	18108397, 22278996, 22278997, 22278998, 22278999, 60432049, 29331822, 29331826, 60432289, 66712502, 60432229, 60433356, 60433438, 65274444, 265010, 264600, 264681, 264448, 264683, 264288, 21906766, 21908768, 265020, 264691, 264692, 264693, 65274620, 65274791
2310	79601668 (4618, 4620)			UNCLASSIFIED	264508
2311	87721189 (4621, 4622)	Novel Protein sim. GBank gi 2137337 pir 48281 - gene mCBP protein - mouse	Contains protein domain (PF00013) - KH domain	transcriptfactor	18108397, 56182575, 22278996, 56994075, 264259, 29331824, 29331827, 264508, 264907, 56182435, 264510, 264511, 265006, 264512, 265007, 265008, 265009, 60433438, 33109954, 265010, 265011, 264603, 265017, 18108351, 264762, 264683, 264288, 264369, 264686, 33657023, 20281149, 20281069, 264628, 263972, 55811576, 35696423, 20281071, 264632, 264636, 18108385, 18108387, 87168518, 22279000, 264563, 264486

2312	87549681 (4623, 4624)	Novel Protein sim. GBank gij2911264 (AC002550) - Unknown gene product [Homo sapiens]			56182575, 56994075, 35696286, 22278996, 22278997, 22278999, 264259, 29331822, 29331824, 29331825, 29331826, 29331827, 52644045, 60432229, 60433356, 55812038, 33109954, 21906754, 87168474, 265018, 18108351, 264288, 52644229, 21906765, 21906766, 21906767, 21906768, 21906769, 265022, 60170615, 33857023, 27486281, 27486284, 35696423, 35695855, 18108385, 22279000, 22279002 263981
2313	80042533 (4625, 4626)	Novel Protein sim. GBank gij3043626(dbj)BAA25477] - (AB011123) KIAA0551 protein [Homo sapiens]			
2314	94313401 (4627, 4628)	Novel Protein sim. GBank gij5586714(emb)CAB51401.1] - (AL035398) dJ796117.2 (CGI-51) [Homo sapiens]	UNCLASSIFIED		52644507, 52646365, 52646842, 22278996, 22278997, 22278999, 264259, 52645080, 29331822, 29331824, 60432289, 29331826, 29331827, 29331828, 35696052, 35658970, 52644045, 265008, 264593, 60433356, 60433438, 264758, 33109954, 265010, 265017, 265018, 265019, 264288, 264369, 21906765, 21906766, 21906768, 35695917, 52644150, 33657023, 33657109, 52645129, 33657349, 35695763, 18108374, 35696423, 35695855, 52644332, 22279000, 22278002, 264563, 264567
2315	80430119 (4629, 4630)		UNCLASSIFIED		264905, 264906, 264767, 264768, 264693, 55811576, 264635, 56182323, 18108385
2316	94312191 (4631, 4632)	Novel Protein sim. GBank gij5531827(gbj)AAD44488.1] - (AF078856) p47 [Homo sapiens]	Contains protein domain (PF00789) - glycoprotein UBX domain		52644507, 52645156, 52646365, 22278994, 22278995, 22278996, 56994075, 35696286, 22278997, 22278998, 22278999, 264259, 29331822, 52645080, 29331824, 29331825, 29331826, 29331827, 35696052, 29331828, 264906, 264907, 29331830, 52644045, 56182435, 264511, 265007, 265008, 265009, 60170831, 60433438, 21906754, 52646317, 33109954, 33657084, 52644296, 87168474, 265010, 87168559, 265017, 265018, 265019, 264681, 264763, 264448, 264683, 264369, 52644229, 21906764, 264689, 21906765, 21906766, 21906767, 21906768, 21906769, 35695917, 265020, 265021, 52644150, 33657023, 18108362, 52645129, 33657182, 33657349, 35695763, 18108370, 18108376, 35696423, 35695855, 264631, 264556, 52644332, 83373044, 18108385, 18108387, 87168518, 60432113, 22279000, 264566, 264567

2317	87020571 (4633, 4634)			UNCLASSIFIED	22278998, 60432049, 264910, 60432229, 264686, 264687, 264688, 264689, 264558, 18108385
2318	79959879 (4635, 4636)			UNCLASSIFIED	265006, 264910
2319	95101781 (4637, 4638)	Novel Protein sim. GBank gi 5202613 emb CAB45746.1 - (AL080155) hypothetical protein [Homo sapiens]			224488, 264569, 18108396, 5264385, 22278994, 22278995, 22278996, 56994075, 35698286, 22278997, 22278998, 264259, 52645080, 29331825, 29331826, 29331827, 29331828, 29331830, 56182435, 60170831, 60432228, 60431735, 33657402, 21906754, 52644298, 87168474, 265011, 87168559, 265017, 265018, 265019, 18108351, 264448, 18108354, 264288, 264369, 52644229, 21906764, 21906765, 21906766, 21906767, 21906768, 21906769, 265021, 265022, 52644150, 33657023, 52645129, 33657109, 27486284, 33657349, 35695763, 18108370, 18108376, 18108379, 35698423, 264558, 83373044, 18108385, 56526486, 87168518, 264554, 264565, 264566
2320	91622426 (4639, 4640)	Novel Protein sim. GBank gi 728837 sp P39194 ALU7_HUMAN - IIII ALU SUBFAMILY SQ WARNING ENTRY IIII		kinase	22278994, 60432049, 60432289, 29331827, 264511, 265008, 52646317, 265017, 265019, 21908765, 18108372, 18108387, 22279002, 264488, 264687, 18108394, 264689
2321	94320377 (4641, 4642)	Novel Protein sim. GBank gi 3873837 emb CAB02700 - (Z81029) Similarity to S.pombe hypothetical protein C104.09C (SW:Q10154); cDNA EST EMBL: T00543 comes from this gene; cDNA EST EMBL: T01062 comes from this gene; cDNA EST EMBL: T01321 comes from this gene; cDNA EST EMBL: T02288 com...		UNCLASSIFIED	21908765, 18108397, 18108398, 21906767, 21908768, 65274791, 22278995, 35695855, 22278998, 265021, 265022, 264510, 265006, 284511, 264512, 265008, 60170615, 264555, 264636, 264556, 18108381, 264259, 60432229, 33657023, 264557, 264558, 264693, 60433356, 264559, 60433438, 29331824, 18108365, 18108348, 18108384, 29331825, 18108385, 33109954, 29331827, 56526486, 29146489, 265011, 60432113, 265017, 265018, 264508, 264563, 264482, 264509, 18108351, 264448, 264907, 264682, 18108370, 264683, 264908, 264288, 264909, 18108354, 264486, 264567
2322	87803165 (4643, 4644)	Novel Protein sim. GBank gi 5878957 emb CAB51685.1 - (AL109630) BACR7A4.y [Drosophila melanogaster]	Contains protein domain (PF00106) - short chain dehydrogenase	dehydrogenase	22278996, 264907, 264511, 264757, 18108351, 264768, 264638

2323	94840445 (4645, 4646)	Novel Protein sim. GBank gi 2494162 sp Q10005 YRY1_CAEEL - HYPOTHETICAL 39.9 KD PROTEIN T15H9.1 IN CHROMOSOME II PRECURSOR	Contains protein domain (PF00226) - eph DnaJ domain	22278984, 22278995, 22278997, 60432049, 264259, 29331822, 33656970, 264509, 56182435, 264511, 265006, 60433356, 60433438, 55812038, 33109954, 21906754, 35658542, 87168474, 265011, 87168559, 265017, 265019, 264760, 264681, 18108351, 264369, 264288, 18108355, 264687, 264688, 21906765, 21906767, 21906768, 55811957, 35659517, 265021, 33657023, 18108362, 27486262, 55811576, 264631, 264555, 83373044, 87168518, 60432113, 22279002
2324	86633607 (4647, 4648)	Novel Protein sim. GBank gi 5419865 emb CAB46377.1 - (AL096732) hypothetical protein [Homo sapiens]	ATPase-associated	264592, 264593, 265020
2325	88165074 (4649, 4650)	Novel Protein sim. GBank gi 231885 sp P29981 CP4C_BLADI - CYTOCHROME P450 4C1 (CYP1VC1)	Contains protein domain (PF00067) - cyto450 Cytochrome P450	265006, 264759, 35695855, 56182323
2326	84390962 (4651, 4652)	Novel Protein sim. GBank gi 231885 sp P29981 CP4C_BLADI - CYTOCHROME P450 4C1 (CYP1VC1)	UNCLASSIFIED	
2327	88081648 (4653, 4654)	Novel Protein sim. GBank gi 4240227 dbj BAA74892.1 - (AB020676) KIAA0869 protein [Homo sapiens]	UNCLASSIFIED	264259, 264508, 264905, 264906, 264907, 264908, 265007, 264512, 264910, 264758, 265010, 264768, 264768, 264769, 33657023, 264693, 264628, 264631, 264634, 264638, 264639, 264488
2328	83388428 (4655, 4656)	Novel Protein sim. GBank gi 1245105 (U46463) - glutamine repeat protein-1 [Mus musculus]	UNCLASSIFIED	60433438, 264595, 265017, 264766, 264692, 264628, 264635, 264638, 264638, 56182323, 60432113, 264566
2329	87604478 (4657, 4658)	Novel Protein sim. GBank gi 1169343 sp P42209 DIF6_MOUSE - DIFF6 PROTEIN	UNCLASSIFIED	265017, 264685, 60432113, 264088
2330	87335396 (4659, 4660)	Novel Protein sim. GBank gi 5679136 gb AAD46874.1 AF16093 - (AF160934)	transport	265009
2331	86990463 (4661, 4662)	BcDNA.LD14189 [Drosophila melanogaster] Novel Protein sim. GBank gi 2104452 emb CAB08779 - (Z95397) unknown [Schizosaccharomyces pombe]	ATPase-associated	35696286, 22278998, 29331824, 60424269, 265006, 265008, 265018, 264448, 264764, 21908765, 35695917, 35695855, 264636, 22279000, 264566
2332	87784182 (4663, 4664)	Novel Protein sim. GBank gi 4956270 gb AAB52261.2 - (Z68318) cDNA EST CEMSD62F comes from this gene; cDNA EST EMBL:C07930 comes from this gene; cDNA EST EMBL:C09493 comes from this gene; cDNA EST yk415e8.3 comes from this gene; cDNA EST yk415e8.5 comes from this gene; cDNA EST...	UNCLASSIFIED	56182575, 56994075, 29331826, 29331828, 264107, 33657402, 87168559, 264683, 35695917, 265021, 33657023, 263976
2333	88206958 (4665, 4666)	Novel Protein sim. GBank gi 4956270 gb AAB52261.2 - (Z68318) cDNA EST CEMSD62F comes from this gene; cDNA EST EMBL:C07930 comes from this gene; cDNA EST EMBL:C09493 comes from this gene; cDNA EST yk415e8.3 comes from this gene; cDNA EST yk415e8.5 comes from this gene; cDNA EST...	UNCLASSIFIED	
2334	94319788 (4667, 4668)	Novel Protein sim. GBank gi 4956270 gb AAB52261.2 - (Z68318) cDNA EST CEMSD62F comes from this gene; cDNA EST EMBL:C07930 comes from this gene; cDNA EST EMBL:C09493 comes from this gene; cDNA EST yk415e8.3 comes from this gene; cDNA EST yk415e8.5 comes from this gene; cDNA EST...	Contains protein domain (PF00441) - dehydrogenase Acyl-CoA dehydrogenase	56182575, 29331825, 21906768, 264636, 83373044

2335	80048103 (4668, 4670)	Novel Protein sim. GBank gi 3203350 (AF062378) - calmodulin-binding protein SHA1 [Mus musculus]	Contains protein domain (PF00612) - IQ calmodulin-binding motif	struct	18108351, 21906769, 264555
2336	95196121 (4671, 4672)	Novel Protein sim. GBank gi 1929056 emb CAA72805 (Y12090) putative 3,4-dihydroxy-2-butanone kinase [Lycopersicon esculentum]		kinase	264907, 35695917, 18108379
2337	95345810 (4673, 4674)	Novel Protein sim. GBank gi 4495063 emb CAB39181.1 (Z85986) dJ108K11.3 (similar to yeast suppressor protein SRP40) [Homo sapiens]		UNCLASSIFIED	35696286, 22278999, 56182181, 29331825, 60424269, 56182435, 33657402, 55812038, 55811386, 265017, 265018, 265019, 21908768, 35695917, 264691, 33657023, 33657109, 263972, 35696423, 35695855, 60432113
2338	87634045 (4675, 4676)	Novel Protein sim. GBank gi 2224689 dbj BAA20829 (AB002372) KIAA0374 [Homo sapiens]	Contains protein domain (PF00323) - Mammalian defensin	UNCLASSIFIED	18108394, 29331822, 66714117, 60432289, 264906, 56182435, 265009, 60433438, 264596, 265010, 265019, 18108354, 264288, 264389, 55811957, 265021, 33657023, 263976, 55811576, 264632, 56182323, 264639
2339	85663319 (4677, 4678)	Novel Protein sim. GBank gi 3873550 emb CAA22127 (AL033534) serine-rich protein [Schizosaccharomyces pombe]		UNCLASSIFIED	35696286, 264592, 264369, 264691, 264558
2340	90937716 (4679, 4680)				65274572, 22278994, 35696286, 22278997, 22278999, 264259, 29331822, 60432289, 29331826, 29331830, 265009, 33657402, 33109954, 265017, 265018, 264766, 284685, 21906769, 35695917, 264691, 264692, 35696423, 87168518, 22279000, 264259, 264908, 264909, 264682, 22279000
2341	87775281 (4681, 4682)	Novel Protein sim. GBank gi 3874563 emb CAB02797 (Z81042) similar to Yeast hypothetical protein YEY6 like; cDNA EST yk206h5.3 comes from this gene; cDNA EST yk206h5.5 comes from this gene; cDNA EST yk303h1.3 comes from this gene; cDNA EST yk303h1.5 comes from this gene; cDNA ...	Contains protein domain (PF00400) - WD domain, G-beta repeat	kinase	264488, 65274572, 22278995, 22278996, 22278997, 22278998, 22278999, 60432049, 264259, 29331822, 29331824, 29331825, 66714117, 29331826, 60432289, 35696052, 264905, 264509, 29331830, 265006, 60170831, 60432229, 60433356, 87168474, 265017, 265018, 265019, 264448, 264369, 264288, 21906765, 21906766, 55811957, 35695917, 265020, 265022, 52644150, 33657023, 65274620, 33657109, 18108370, 18108376, 55810764, 35696423, 55811576, 264556, 264558, 18108365, 60432113, 264583, 264584, 264565, 264566, 264587, 264907, 264512, 265011, 264683
2343	87775448 (4685, 4686)	Novel Protein sim. GBank gi 4929741 gb AAD34131.1 AF15189 - (AF151894) CGI-136 protein [Homo sapiens]		UNCLASSIFIED	
2344	79953198 (4687, 4688)	Novel Protein sim. GBank gi 2506307 sp P13944 CA1C_CHICK - COLLAGEN ALPHA 1(XII) CHAIN PRECURSOR (FIBROCHIMERIN)	Contains protein domain (PF00092) - von Willebrand factor type A domain	UNCLASSIFIED	264758
2345	94319789 (4689, 4690)			collagen	264488, 264259, 66712502, 264759, 83373044, 264566

2346	94131820 (4691, 4692)	Novel Protein sim. GBank gi 1255411 (U55153) - one short region of weak similarity to S. cerevisiae protease A inhibitor 3 (SP:P01094) and another short region of weak similarity to S. cerevisiae glucose repression mediator protein (SP:P14922) [Caenorhabditis elegans]	Contains protein domain (PF00515) - TPR Domain	proteaseinhib	35696286, 22278998, 264259, 35698052, 29331828, 33657402, 60433356, 33109954, 87188559, 264603, 265019, 18108351, 264681, 264685, 21906766, 265021, 33637109, 55811576, 35695855, 264637, 52644332, 264557, 83373044, 22279000, 22279002
2347	85330387 (4693, 4694)				22278997, 264511, 264683, 264684, 264768, 264687, 264688, 264691, 264692, 55811576
2348	95198133 (4695, 4696)	Novel Protein sim. GBank gi 1929056[emb] (CAA72805) - (Y12090) putative 3,4-dihydroxy-2-butanone kinase [Lycopersicon esculentum]		kinase	18108394, 35698286, 264259, 35698052, 264508, 264509, 264905, 264906, 264907, 264908, 264909, 264510, 264511, 265006, 265007, 264512, 265008, 265009, 264910, 264591, 264592, 264593, 264594, 264757, 264595, 264596, 264758, 265011, 264601, 264762, 18108351, 264764, 264288, 264766, 264768, 264689, 35695917, 264693, 264628, 18108370, 264629, 18108374, 35698423, 264631, 264635, 264636, 264637, 264638, 264639, 83373044, 18108385, 264567, 264486
2349	87776502 (4697, 4698)	Novel Protein sim. GBank gi 4884106[emb] (CAB43254.1) - (AL050062) hypothetical protein [Homo sapiens]			35698052, 29146499, 264909, 264369
2350	88260594 (4699, 4700)				22278998, 22278999, 264259, 29331822, 29331824, 29331825, 29331827, 29331828, 33109954, 21906754, 265010, 87168559, 265018, 265019, 264761, 264681, 264288, 18108357, 21906766, 21906767, 264691, 264692, 35695855, 87168518, 22279000, 22279002, 264482
2351	86988042 (4701, 4702)	Novel Protein sim. GBank gi 728832[sp]P39189[ALU2_HUMAN - !!!!! ALU SUBFAMILY SB WARNING ENTRY !!!!!]		kinase	56182575, 264909, 265006, 264558
2352	87337198 (4703, 4704)	Novel Protein sim. GBank gi 731637[sp]P38760[YHH5_YEAST - HYPOTHETICAL 75.9 KD PROTEIN IN SPO13-ARG4 INTERGENIC REGION]	Contains protein domain (PF00076) - RNA recognition motif (a.k.a. RRM, RBD, or RNP domain)	UNCLASSIFIED	264259, 264448
2353	91638784 (4705, 4706)	Novel Protein sim. GBank gi 1346955[sp]P48809[IRB27_DROME - HETEROGENEOUS NUCLEAR RIBONUCLEOPROTEIN 27C (HNRNP 48) (HRP48.1)]	Contains protein domain (PF00076) - RNA recognition motif (a.k.a. RRM, RBD, or RNP domain)	dna_ma_bind	29331826, 55812038, 265019, 264692, 264636
2354	87337199 (4707, 4708)	Novel Protein sim. GBank gi 731637[sp]P38760[YHH5_YEAST - HYPOTHETICAL 75.9 KD PROTEIN IN SPO13-ARG4 INTERGENIC REGION]	Contains protein domain (PF00076) - RNA recognition motif (a.k.a. RRM, RBD, or RNP domain)	UNCLASSIFIED	29331824, 264908, 265006, 265008

2355	91638786 (4709, 4710)	Novel Protein sim. GBank gij4938503[embjCAB43861.1] - (AL078465) hnRNP-like protein [Arabidopsis thaliana]	Contains protein domain (PF00076) - RNA recognition motif. (a.k.a. RRM, RBD, or RNP domain)	dna_rna_bind	56994075, 22278996, 35696286, 22278999, 284259, 29331825, 29331826, 29331828, 29146498, 264905, 264908, 265008, 264758, 87168474, 265010, 265017, 264687, 21906765, 21906767, 21906769, 264691, 264692, 263967, 18108370, 87168518, 22279000
2356	95327688 (4711, 4712)	Novel Protein sim. GBank gij5138920[gbjAAD40377.1] - (AF092135) PTD014 [Homo sapiens]			52644507, 22278995, 35696286, 22278996, 22278997, 22278998, 22278999, 284259, 29331824, 66714117, 29331825, 60432289, 35696052, 29331828, 264908, 66712502, 264512, 265007, 265008, 60170831, 60432229, 60433356, 60433438, 264758, 52646317, 33109954, 21906764, 55811386, 87168474, 265017, 265018, 264605, 265019, 264681, 264682, 264448, 264369, 264288, 264686, 264768, 21906765, 21906766, 21906767, 21906768, 21906769, 265021, 60170615, 33657109, 27486264, 35695763, 55810764, 18108379, 35696423, 55811576, 35695855, 60170394, 56182323, 83373044, 18108385, 56526486, 264404, 60432113, 22279000, 264482, 264563, 264566, 264486, 264567
2357	87775458 (4713, 4714)	Novel Protein sim. GBank gij4928741[gbjAAD34131.1]AF15189 - (AF151894) CGI-136 protein [Homo sapiens]		UNCLASSIFIED	284488, 264768, 18108394, 284259, 29331822, 18108370, 18108374, 264510, 265017, 264482, 264563, 264762, 264565, 264566, 264369, 18108354
2358	87777078 (4715, 4716)	Novel Protein sim. GBank gij4218005 (AC006135) - putative vicilin storage protein (globulin-like) [Arabidopsis thaliana]		UNCLASSIFIED	22278997, 22278999, 264509, 264905, 264592, 18108351, 264681, 264682, 264769, 32833986, 18108374, 264556, 18108385, 264482
2359	87755859 (4717, 4718)	Novel Protein sim. GBank gij1086830 (U41264) - coded for by C. elegans cDNA yk208.5; coded for by C. elegans cDNA yk44g1.5; coded for by C. elegans cDNA yk12b7.5; coded for by C. elegans cDNA yk36g6.5; coded for by C. elegans cDNA yk208.5; coded for by C. elegans cDNA yk16g12....		UNCLASSIFIED	35696286, 22278998, 264905, 264511, 265007, 265008, 60433438, 264288, 264686, 21906769, 265020, 264692, 35695855, 264558, 56526486, 264563
2360	80046125 (4719, 4720)	Novel Protein sim. GBank gij3881545[embjCAA93779] - (Z69904) cDNA EST yk428d5.3 comes from this gene; cDNA EST yk428d5.5 comes from this gene [Caenorhabditis elegans]		UNCLASSIFIED	22278997, 29331826, 263981, 22279000
2361	94232181 (4721, 4722)	Novel Protein sim. GBank gij746487 (U23514) - No definition line found [Caenorhabditis elegans]			22278995, 22278999, 264512, 265009, 264757, 21906765, 65274620, 18108370, 60431528, 18108374, 264635, 60170394, 264482

2362	61721193 (4723, 4724)	Novel Protein sim. GBank gll1171083sp1P19706(MYSB ACACA - MYOSIN HEAVY CHAIN IB (MYOSIN HEAVY CHAIN IL)		UNCLASSIFIED	22278998, 264259, 29331822, 29331824, 60432289, 264509, 264512, 60432229, 60433356, 264448, 264682, 264683, 264369, 21906765, 21906768, 21906769, 60432113, 22279000, 22279002
2363	95006835 (4725, 4726)	Novel Protein sim. GBank gll1854065[emb]CAA58337] - (X83413) U88 [Human herpesvirus 6]		UNCLASSIFIED	264907, 264629, 264635
2364	94827104 (4727, 4728)	Novel Protein sim. GBank gll5839830[gb]AAD45886, 1JAF14601 - (AF146018) hydroxypyruvate reductase [Homo sapiens]	Contains protein domain (PF00389) - D-isomer specific 2-hydroxyacid dehydrogenases	reductase	264488, 18108394, 264887, 18108398, 22278996, 56994075, 35996286, 22278997, 22278998, 264259, 66714117, 29331825, 35696052, 264509, 264905, 264906, 264907, 264908, 66712502, 264909, 264511, 265006, 264512, 265007, 265008, 33657402, 264758, 21906754, 87168474, 265010, 87168559, 264603, 265017, 265018, 265019, 264760, 264762, 18108351, 264448, 264764, 264683, 264684, 264288, 18108355, 264766, 18108358, 264689, 18108359, 21906765, 21906766, 21906767, 35695917, 265020, 265021, 265022, 60170615, 52644150, 264691, 33657023, 264692, 18108364, 33657109, 18108368, 18108370, 18108374, 35696423, 35695855, 264635, 264556, 264557, 264639, 60170394, 83373044, 18108383, 18108384, 18108385, 18108388, 56526486, 264482, 264564, 264486
2365	94140746 (4729, 4730)	Novel Protein sim. GBank gll1840045 (U49082) - transporter protein [Homo sapiens]		transport	22278996, 22278998, 22278999, 264907, 264909, 264910, 33657402, 264758, 264600, 264766, 264687, 264689, 21906765, 21906767, 21906768, 21906769, 265021, 33657023, 33657109, 83373044, 264566
2366	94312388 (4731, 4732)			UNCLASSIFIED	52644507, 264259, 29331824, 29331825, 29331826, 29331827, 29331828, 264907, 29331830, 264909, 264511, 265008, 33657402, 264595, 52646317, 265017, 265018, 265019, 264605, 264685, 264766, 264689, 21906766, 21906769, 35695917, 265020, 265021, 265022, 52644150, 35695855, 52644332, 18108385, 18108387, 264564, 264568
2367	94140910 (4733, 4734)	Novel Protein sim. GBank gll1065457 (U40410) - C54G7.4 gene product [Caenorhabditis elegans]	Contains protein domain (PF00400) - WD domain, G-beta repeat	UNCLASSIFIED	35696286, 21906768, 55810764, 65274791, 264567
2368	94322190 (4735, 4736)				264628

2369	94314334 (4737, 4738)	Novel Protein sim. GBank gii5360901[dbj]BAA02158.1 - (AB029343) a-helix coiled-coil rod homologue [Homo sapiens]		struct	52644507, 52646842, 35696286, 264092, 264094, 52645080, 35696052, 264107, 29331830, 52644045, 265006, 265007, 265009, 52644228, 264689, 21906765, 21906766, 35695917, 265020, 52644150, 263967, 33657109, 27486285, 35695763, 18108370, 263974, 18108374, 18108376, 52644332, 263981, 18108385, 264508, 264909, 264596
2370	78804120 (4739, 4740)			UNCLASSIFIED	264369
2371	57280406 (4741, 4742)			UNCLASSIFIED	263967, 263981
2372	87642413 (4743, 4744)			UNCLASSIFIED	29331826, 265010, 265019, 35695917, 264634, 60432113
2373	87418611 (4745, 4746)	Novel Protein sim. GBank gii4589582[dbj]BAA76813.1 - (AB023186) KIAA0969 protein [Homo sapiens]			
2374	94123865 (4747, 4748)	Novel Protein sim. GBank gii5105131[dbj]BAA0445.1 - (AP000061) 246aa long hypothetical ribonuclease PH [Aeropyrum pernix]	Contains protein domain (PF01138) - 3' exonuclease family	UNCLASSIFIED	265006, 265007, 265008, 265009, 265011, 264766, 35695917, 35695855, 263981, 264557, 264585
2375	87731355 (4749, 4750)	Novel Protein sim. GBank gii1351115[sp]P47758[SRPB_MOUSE - SIGNAL RECOGNITION PARTICLE RECEPTOR BETA SUBUNIT (SR-BETA)]		UNCLASSIFIED	60432049, 29331824, 264907, 52644045, 264512, 60433356, 21906754, 52644286, 87168559, 264448, 21906765, 21906768, 21906769, 33657023, 18108368, 55811576, 52644332
2376	87613744 (4751, 4752)	Novel Protein sim. GBank gii2645435 (AF007780) - CHD3 [Drosophila melanogaster]	Contains protein domain (PF00628) - PHD-finger	ATPase associated	264259, 29331830, 264909, 264910, 265009, 60433438, 21906754, 265017, 265018, 265019, 264682, 264288, 264685, 21906767, 263972, 35695855, 87168518, 60432113
2377	95319689 (4753, 4754)	Novel Protein sim. GBank gii5257005[gb]AAD41239.1 - (AF083249) Rb binding protein homolog [Homo sapiens]	Contains protein domain (PF01388) - ARID DNA binding domain	UNCLASSIFIED	18108394, 65274572, 22278997, 22278999, 264095, 29331822, 29147620, 29331824, 66714117, 29331825, 29331826, 29331828, 33656970, 29146498, 29146499, 264509, 265006, 265007, 265008, 265009, 60170831, 265010, 265011, 265018, 55811150, 18108351, 264764, 264288, 21906767, 21906768, 29148627, 29148629, 265021, 33657023, 33657109, 18108370, 18108374, 18108379, 35696423, 264556, 83373044, 18108385, 18108388, 56526486, 22279000, 22279002, 264563
2378	94137032 (4755, 4756)	Novel Protein sim. GBank gii1072198 (U40942) - No definition line found [Caenorhabditis elegans]		UNCLASSIFIED	65274572, 56182575, 35696286, 264259, 29331822, 29331824, 66714117, 29331825, 29331826, 60432289, 29331827, 56182435, 264510, 265009, 60433356, 87168474, 265011, 265018, 264288, 21906765, 33657023, 264557, 56182323, 83373044, 18108385, 22279002, 264482
2379	65444324 (4757, 4758)	Novel Protein sim. GBank gii3337357 (AC004481) - hypothetical protein [Arabidopsis thaliana]	Contains protein domain (PF00400) - WD domain, G-beta repeat	kinase	265017, 264288, 21906768

2380	88023062 (4759, 4760)	Novel Protein sim. GBank gi 4502939 ref NP_001845.1 pCOL1 - collagen, type XI, alpha 1	Contains protein domain (PF01410) - Fibrillar collagen C-terminal domain	- collagen.	264908, 264910, 265011
2381	87608241 (4761, 4762)	Novel Protein sim. GBank gi 4455609 emb CAB36555 - (AL031846) dJ742C19.5 (novel Chromobox protein) [Homo sapiens]	Contains protein domain (PF00385) - 'chromo' (CHR) domain Organization Modifier domain	- helicase	56182575, 264091, 264093, 264259, 29331825, 264105, 264906, 60433356, 21908754, 265017, 265019, 264683, 264288, 264685, 264686, 264687, 264691, 264692, 264693, 55811576, 264636, 264567
2382	91225982 (4763, 4764)	Novel Protein sim. GBank gi 4325130 gb AAD17276 - (AF119716) dMI-2 protein [Drosophila melanogaster]	Contains protein domain (PF00628) - PHD-finger	- transport	29331824, 60432289, 264905, 264596, 21908754, 264789, 265022, 264693, 263987, 33657109, 264629, 264631, 264558, 83373044, 60432113, 264482
2383	87442841 (4765, 4766)	Novel Protein sim. GBank gi 1902982 dbj BAA19005 - (D89049) lectin-like oxidized LDL receptor [Bos taurus]	Contains protein domain (PF00059) - Lectin C-type domain	- glycoprotein	265009, 21908765, 21908766
2384	95354768 (4767, 4768)	Novel Protein sim. GBank gi 2462851 AF016252 - Spinophilin [Rattus norvegicus]	Contains protein domain (PF00595) - PDZ domain (Also known as DHR or GLGF)	- struct.	264488, 52644507, 52645156, 52646365, 35698286, 22278999, 52645080, 29331824, 29331826, 35696052, 29331828, 264906, 264828, 52644045, 265006, 265008, 265009, 33109954, 33857084, 52644296, 265011, 265017, 265018, 264683, 52644229, 21908765, 21908767, 21908768, 265020, 52644150, 33657023, 264693, 65274620, 52645129, 33657109, 33657182, 27486261, 27486262, 27486264, 33657349, 27486265, 35695763, 18108374, 35695855, 264634, 264555, 264556, 264557, 52644332, 264558, 264559, 18108385, 22279000, 22279002
2385	95419485 (4769, 4770)			UNCLASSIFIED	264488, 52644507, 52645156, 264887, 52646365, 22278995, 22278996, 22278997, 22278998, 264258, 52645080, 29331822, 29331826, 35696052, 52644045, 285006, 265007, 265008, 265009, 264910, 60432229, 60433356, 52646317, 21908754, 265019, 264448, 264683, 264686, 264687, 264689, 21908765, 21908766, 21908767, 21908769, 55811957, 265021, 265022, 264690, 264691, 264692, 65274620, 33657109, 18108370, 264631, 52644332, 22279000, 22279002, 264583, 264585, 264567
2386	94742849 (4771, 4772)	Novel Protein sim. GBank gi 4929699 gb AAD34110.1 AF15187 - (AF151873) CGI-115 protein [Homo sapiens]		- glycoprotein	264488, 22278995, 22278996, 22278997, 264259, 29148498, 264112, 264511, 60170831, 60432229, 264595, 60433438, 87168474, 87168559, 264682, 21908765, 21908766, 21908767, 21908769, 29148629, 35695917, 265021, 264690, 33657109, 264628, 18108378, 83373044, 60432113, 22279000, 264564, 264566, 264487

2387	14987880 (4773, 4774)			UNCLASSIFIED	264634
2388	11424604 (4775, 4776)			UNCLASSIFIED	264595
2389	95310850 (4777, 4778)	Novel Protein sim. GBank gi4758058 ref NP_004372.1 pCREB - CAMP responsive element binding protein-like 1	Contains protein domain (PF00170) - bZIP transcription factor	UNCLASSIFIED dna_rna_bind	264488, 22278988, 22278995, 264509, 264805, 264906, 264907, 264908, 264909, 265006, 264511, 264512, 264910, 264591, 21908754, 264601, 264604, 264761, 18108351, 264764, 264288, 264766, 264768, 264769, 21908765, 21908768, 264692, 264693, 35696423, 264635, 264636, 264555, 83373044, 22279000, 264486
2389	94320912 (4778, 4780)	Novel Protein sim. GBank gi1644239 dbj BAA1223 - (D84103) mitochondrial DNA polymerase gamma [Homo sapiens]	Contains protein domain (PF00476) - DNA polymerase family A	polymerase	52644507, 56182575, 22278995, 35696286, 22278996, 22278997, 22278998, 29331822, 29331825, 29331826, 35696052, 264905, 52644045, 265009, 264758, 264759, 33109954, 52644296, 85658542, 265011, 265017, 265018, 264605, 52644229, 21908765, 21908787, 21908788, 21908789, 35695917, 52644150, 33657023, 33657109, 33657349, 35695763, 18108370, 18108374, 18108376, 35696423, 35695855, 264555, 52644332, 56182323, 60170394, 83373044, 56526486
2391	80036194 (4781, 4782)			UNCLASSIFIED	263976
2392	94245016 (4783, 4784)	Novel Protein sim. GBank gi4240169 dbj BAA74863.1 - (AB020647) KIAA0840 protein [Homo sapiens]	Contains protein domain (PF00560) - Leucine Rich Repeat	nuclease	35696286, 35696032, 264508, 264905, 264509, 264908, 264907, 264908, 264909, 264510, 264511, 264512, 264910, 265009, 264591, 264758, 264600, 264604, 264782, 264448, 264764, 264369, 264766, 264768, 264769, 264689, 35695917, 264629, 18108374, 263978, 35696423, 35695855, 264631, 264634, 264635, 264636, 264637, 264638, 60170394, 264639, 264565, 264486

2383	95302633 (4785, 4786)	Novel Protein sim. GBank gi4506667 ref NP_000993.1 pRPLP - ribosomal protein, large, P0	Contains protein domain (PF00486) - Ribosomal protein L10	ribosomal prol	18108392, 50424179, 264489, 18108394, 18108397, 22278995, 56994075, 35696286, 22278996, 22278997, 22278999, 264093, 60432049, 264259, 29331822, 29147620, 20281099, 29331824, 29331825, 66714117, 60432289, 29331826, 29331827, 29331828, 35696032, 29146499, 264508, 264509, 264905, 264907, 264908, 66712502, 52644045, 264828, 264909, 56182435, 264112, 264113, 264510, 265006, 264511, 265007, 265008, 265009, 264910, 264591, 264593, 60433356, 264595, 60433438, 52646317, 33109954, 21908754, 55811386, 265010, 265011, 265017, 265018, 265019, 264891, 264762, 18108351, 264763, 264682, 264764, 264683, 264369, 264288, 18108354, 264766, 264686, 264687, 264688, 264689, 18108359, 21908765, 21908766, 21908767, 21908768, 21908769, 55811957, 29148629, 29148784, 35695917, 265021, 265022, 33657023, 264692, 264693, 18108364, 33657109, 18108368, 27486261, 27486262, 33657349, 35695763, 18108370, 263972, 264629, 18108374, 263977, 18108376, 263978, 55810764, 35696423, 35695855, 264634, 60431850, 264555, 264637, 264557, 263981, 264558, 18108381, 60170394, 35696286, 22278997, 22278998, 56182181, 35696052, 265006, 264592, 55811386, 265010, 265011, 265017, 265019, 264448, 264683, 264288, 21908765, 21908768, 21908769, 55811957, 35695917, 33657023, 65274620, 33657182, 33657349, 35695763, 18108374, 18108376, 55810764, 55811576, 35696423, 60170394, 18108385, 264564, 264566, 264567
2384	94323266 (4787, 4788)	Novel Protein sim. GBank gi4159888 (AC004908) - zinc finger protein from gene of uncertain exon structure; similar to Q99878 (P1D'g3025333) [Homo sapiens]	Contains protein domain (PF00096) - Zinc finger, C2H2 type	dna_rna_bind	
2385	95287212 (4789, 4790)	Novel Protein sim. GBank gi5712756 gb AAD47636.1 AF16079 - (AF16079) calcium transporter CaT1 [Rattus norvegicus]		dna_rna_bind	264259, 29331824, 264910, 264288, 265021, 83373044, 18108387, 264563, 264566

2398	95096700 (4791, 4792)	Novel Protein sim. GBank gjl1063222[pir]B3-087 - hypothetical protein (L1H 3' region) - human	Contains protein domain (PF00560) - Leucine Rich Repeat	nuclease	52646365, 18108397, 56182575, 35696286, 22278997, 22278999, 60432049, 264259, 29331822, 29331824, 29331825, 29331826, 29331827, 29331828, 264108, 264907, 29331830, 66712502, 264110, 60170831, 264591, 33657402, 60433438, 55812038, 33109954, 21908754, 33657084, 87168474, 265017, 265018, 265019, 264760, 264448, 264288, 264766, 52644229, 21906768, 21906767, 265020, 265021, 60170615, 264692, 33657023, 65274620, 52645129, 33657182, 27486262, 27486264, 27486265, 264629, 18108374, 35698423, 35695855, 264631, 264556, 52644332, 264558, 83373044, 18108388, 87168518, 22279002, 264482
2397	87280854 (4793, 4794)				52644507, 52645156, 56182575, 264259, 29147620, 264805, 264907, 264908, 264909, 264910, 264758, 52644296, 264603, 264604, 264762, 264681, 264764, 18108357, 264769, 21906768, 264693, 264628, 264635, 264638, 264639, 264564
2398	88047889 (4795, 4796)	Novel Protein sim. GBank gjl3258609 (AC005178) - H53_GS1 [Homo sapiens]		UNCLASSIFIED	
2399	87738965 (4797, 4798)	Novel Protein sim. GBank gjl786117 (L41834) - nuclear protein [Ensis minor]		UNCLASSIFIED	56994075, 22278997, 22278998, 22278999, 264259, 29331822, 29331824, 66714117, 60432289, 264906, 29331830, 56182435, 264112, 264910, 33109954, 21906754, 87168474, 264600, 265017, 265018, 265019, 264764, 264765, 21906765, 21906766, 21906767, 21906769, 35695917, 265020, 265022, 60170815, 33657023, 18108370, 18108374, 264556, 60170394, 264558, 87168518, 22279000, 22279002, 264564, 264566, 264487
2400	91214118 (4799, 4800)	Novel Protein sim. GBank gjl2352822[gb]AAB69285.1] - (AF008945) glucose-6-phosphatase [Haplochromis nubilus]		phosphatase	21908766, 52646842, 56994075, 33657182, 27486262, 52644296, 265017

2401	91214116 (4801, 4802)	Novel Protein sim. GBank gij2352822[gbjAAB69285.1] - (AF008945) glucose-6-phosphatase [Haplochromis nubilus]		phosphatase	52644507, 52645156, 52644228, 264688, 21908764, 21908765, 52646385, 52646842, 21908766, 21906767, 21906768, 22278995, 35695917, 56994075, 35696286, 22278996, 22278997, 265020, 22278998, 22278999, 264259, 33657023, 52645080, 264693, 29331824, 33657109, 52645129, 29331826, 33657182, 29331827, 35696052, 27486261, 27486262, 33656970, 33657349, 27486265, 35695763, 264106, 264905, 35696423, 35695855, 265008, 285007, 265008, 265009, 264637, 52644332, 55812038, 52646317, 18108385, 52644286, 87168474, 265010, 87168559, 60432113, 265017, 265018, 265019, 264583, 264288, 264907, 264908, 264909, 264566
2402	91221408 (4803, 4804)	Novel Protein sim. GBank gij4689258[gbjAAD27832.1]AF12185 - (AF121859) sorting nexin 9 [Homo sapiens]			
2403	94135432 (4805, 4806)	Novel Protein sim. GBank gij4929575[gbjAAD34048.1]AF15181 - (AF151811) CGI-53 protein [Homo sapiens]	Contains protein domain (PF00062) - C-type lysozyme/alpha-lactalbumin family		22278999, 35696052, 265018, 264686, 264693, 83373044, 264567
2404	95312605 (4807, 4808)	Novel Protein sim. GBank gij2315796 (AF016685) - similar to short chain-type dehydrogenases [Caenorhabditis elegans]	Contains protein domain (PF00106) - short chain dehydrogenase	dehydrogenase	35696286, 29331826, 35696052, 265008, 265018, 21908769, 264564
2405	94311851 (4809, 4810)	Novel Protein sim. GBank gij464178[dbj]BAA03581 - (D14853) polyprotein [Hepatitis C virus]		UNCLASSIFIED	35696286, 29331822, 265007, 21906754, 265017, 265018, 265019, 264763, 264369, 21906765, 35695917, 265020, 265021, 52644150, 264693, 35695855, 264632, 52644332, 22279002
2406	88094501 (4811, 4812)	Novel Protein sim. GBank gij2773363 (AF041382) - microtubule binding protein D-CLIP-190 [Drosophila melanogaster]	Contains protein domain (PF01302) - CAP-Gly domain	struct	52646842, 22278994, 22278996, 35696286, 22278997, 22278998, 22278999, 264092, 264093, 60432049, 264259, 29331822, 29331824, 29331825, 29331827, 35696052, 29331828, 264102, 264106, 264906, 52644045, 265007, 265008, 265009, 264910, 264592, 60433356, 60433438, 33109954, 265010, 265011, 265018, 265019, 264369, 264685, 264686, 21906768, 21906769, 52644150, 264693, 52645129, 264628, 35696423, 264632, 56182323, 264639, 22279000, 22279002, 264563
2407	79465005 (4813, 4814)			UNCLASSIFIED	264685, 264686
2408	87391503 (4815, 4816)	Novel Protein sim. GBank gij423442[pir]S33513 - gene Fil protein - mouse		UNCLASSIFIED	264910, 265010, 264448, 264557

2409	94741770 (4817, 4818)	Novel Protein sim. GBank gii1176601spIP459661YN26_CAEEL - HYPOTHETICAL 20.8 KD PROTEIN T09A5.8 IN CHROMOSOME III		UNCLASSIFIED	22278995, 22278996, 22278997, 264097, 29331822, 29331824, 29331827, 29146498, 52644045, 60433438, 33657084, 87168474, 264760, 21908767, 29148627, 29148629, 52644150, 33657023, 263967, 20281069, 18108374, 20281071, 56182323, 83373044, 18108385, 87168518 22278998, 264259
2410	87604860 (4819, 4820)	Novel Protein sim. GBank gii4566262[gb]AAC48052.2] - (UB4849) Contains similarity to Pfam domain: PF00646 (F- box). Score=28.7, E-value=4.3e-05, N=1 [Caenorhabditis elegans]	Contains protein domain (PF00080) - Copper/zinc superoxide dismutase (SODC)		
2411	87534633 (4821, 4822)	Novel Protein sim. GBank gii3114713 (AF061346) - Edp1 protein [Mus musculus]		Inf	29331824, 29331827, 29331828, 264764, 264369, 33657109, 56182323
2412	87778332 (4823, 4824)	Novel Protein sim. GBank gii5410336[gb]AAD43038.1] - (AF106685) myelin gene expression factor 2 [Homo sapiens]	Contains protein domain (PF00076) - RNA recognition motif, (a.k.a. RRM, RBD, or RNP domain)	dna_rna_bind	22278998, 29331827, 264907, 265011, 265017, 265018, 265019, 18108351, 21906766, 265020, 33657109, 264559, 18108385
2413	94133820 (4825, 4826)	Novel Protein sim. GBank gii5262705[emb]CAB45778.1] - (AL080214) hypothetical protein [Homo sapiens]	Contains protein domain (PF00038) - Intermediate filament proteins	struct	264488, 264259, 29331826, 264508, 264905, 264509, 264906, 264907, 264908, 264510, 264511, 264512, 265008, 265009, 264910, 265011, 264682, 264764, 264768, 264686, 264768, 264689, 265021, 33657023, 18108370, 264628, 35695855, 264632, 264634, 264635, 264638, 83373044, 264563, 264564, 264565, 264566, 264567, 264486
2414	94312590 (4827, 4828)	Novel Protein sim. GBank gii1082340[pri]S52863 - DNA- binding protein R kappa B - human		ubiquitin	52645156, 52646842, 52646365, 18108398, 56182575, 22278994, 22278995, 56994075, 22278996, 35696286, 22278997, 22278998, 22278999, 264259, 52645080, 29331822, 29331824, 29331825, 29331826, 29331827, 29331828, 35696052, 33656970, 29331830, 264909, 60433356, 33657402, 264594, 52646317, 21906754, 33657084, 265010, 87168559, 265017, 265018, 265019, 264369, 264684, 264687, 264688, 56181562, 21906764, 264689, 21906765, 21906766, 21906767, 29148627, 21906769, 265020, 265021, 60170615, 33657023, 264693, 52645129, 33657109, 33657182, 27486261, 27486262, 27486265, 33657349, 18108370, 60431528, 264629, 18108374, 18108376, 55810764, 264636, 52644332, 264638, 264558, 56182323, 83373044, 18108385, 87168518, 22279002

2415	88088002 (4828, 4830)	Novel Protein sim. GBank gij423915iprj A45439 - myosin I heavy chain - rat	Contains protein domain (PF00063) - Myosin head (motor domain)	struct	264259, 264808, 60433356, 33557402, 21908754, 265018, 264687, 264689, 21906769, 55811957, 265021, 264690, 264691, 33657023, 264693, 35696423, 56182323, 56526486
2416	94118356 (4831, 4832)	Novel Protein sim. GBank gij3025445 (AC004528) - R32184_1 [Homo sapiens]			264638
2417	87733334 (4833, 4834)	Novel Protein sim. GBank gij1084944iprj S54495 - hypothetical protein YPR021c - yeast (Saccharomyces cerevisiae)	Contains protein domain (PF00153) - Mitochondrial carrier proteins		264094, 29331822, 29331824, 29331827, 264369
2418	94234349 (4835, 4836)	Novel Protein sim. GBank gij1176572ipr P45895 YNA4_CAEEL - HYPOTHETICAL 91.0 KD PROTEIN PAR2.4 IN CHROMOSOME III	Contains protein domain (PF00411) - Ribosomal protein S11	UNCLASSIFIED	56994075, 264091, 264259, 29331824, 29331825, 60432289, 29331828, 264905, 264907, 264511, 265009, 60432229, 21906754, 87168559, 265019, 264682, 21906768, 21906769, 265020, 265021, 33657023, 65274620, 18108370, 55811576, 264634, 60170394, 18108385, 22279000, 22279002, 264566
2419	82374249 (4837, 4838)	Novel Protein sim. GBank gij284006iprj S18732 - autoantigen, 64K - human		struct	264569, 264762, 264448, 264691, 264631, 264634, 264555, 264556, 264638, 264558
2420	94844244 (4839, 4840)	Novel Protein sim. GBank gij107621iprj S50755 - hypothetical protein VSP-3 - Chlamydomonas reinhardtii		UNCLASSIFIED	29331824, 29331825, 29331828, 60432229, 33109954, 85658542, 87168474, 265018, 264288, 265020, 264564
2421	87805345 (4841, 4842)	Novel Protein sim. GBank gij224567iprj BAA20772] - (AB002311) KIAA0313 [Homo sapiens]	Contains protein domain (PF00617) - RasGEF domain	UNCLASSIFIED	264809, 264768, 264638
2422	88084714 (4843, 4844)	Novel Protein sim. GBank gij4505153ipr NP_002392.1pMEKK - MAP/ERK kinase 3	Contains protein domain (PF00069) - Eukaryotic protein kinase domain	transport	18108392, 18108394, 18108398, 264906, 265006, 265010, 18108351, 18108374, 18108385
2423	88058300 (4845, 4846)	Novel Protein sim. GBank gij4505153ipr NP_002392.1pMEKK - MAP/ERK kinase 3		kinase	264259, 60432049, 29331822, 29331826, 60432289, 29331828, 265008, 265009, 60433356, 21906754, 265017, 265018, 265019, 21906768, 21906769, 265020, 265021, 20281149, 263971, 60432113
2424	94854047 (4847, 4848)	Novel Protein sim. GBank gij2988398 (AC004381) - Unknown gene product [Homo sapiens]		UNCLASSIFIED	56182575, 35696286, 22278997, 60432049, 264259, 29331826, 29331828, 264905, 66712502, 29331830, 60433356, 265011, 265019, 264766, 21906768, 55811957, 264692, 33657023, 33657109, 55811576, 56182323, 83373044, 18108385, 18108388, 60432113, 22279000
2425	87415981 (4849, 4850)	Novel Protein sim. GBank gij2077932ipr BAA19879] - (D86556) Protein Kinase [Rattus norvegicus]	Contains protein domain (PF00069) - Eukaryotic protein kinase domain	kinase	264634
2426	87613945 (4851, 4852)	Novel Protein sim. GBank gij2039368ipr AA053003.1] - (U94619) circulating cathodic antigen [Schistosoma mansoni]		UNCLASSIFIED	22278996, 22278998, 264259, 264102, 264512, 265008, 21906767, 18108370, 18108374, 263976

2427	87622693 (4853, 4854)	Novel Protein sim. GBank gij480695jibjAAD27737.1jAF13296 - (AF132962) CGI-28 protein [Homo sapiens]	Contains protein domain (PF00573) - Ribosomal protein L4/L1 family	ribosomalprot	264259, 20281099, 35696052, 265008, 264594, 265011, 264760, 18108351, 264682, 264683, 264369, 264684, 264686, 264687, 264688, 21906766, 264691, 264692, 18108374, 18108377, 264557, 264639, 18108385
2428	85732889 (4855, 4856)	Novel Protein sim. GBank gij1537070 (U63840) - nucleoporin p54 [Rattus norvegicus]			22278998, 22278999, 35696052, 21906754, 264288, 21906765, 21906768, 21906769, 35695917, 265020, 263972, 22279002
2429	87769276 (4857, 4858)	Novel Protein sim. GBank gij601931 (M94316) - neurofilament-H [Oryctolagus cuniculus]	Contains protein domain (PF00711) - Beta defensins	UNCLASSIFIED	22278999, 29331824, 264906, 264909, 264511, 265009, 21906754, 265017, 265018, 265019, 264448, 264683, 264288, 21906785, 21906788, 265021, 264693, 18108381
2430	86948827 (4859, 4860)			UNCLASSIFIED	264112, 264691
2431	87649884 (4861, 4862)	Novel Protein sim. GBank gij386072jembjCAA14630j - (AJ235270) CELL DIVISION PROTEIN FTSJ (ftsJ) [Rickettsia prowazekii]	Contains protein domain (PF01728) - FtsJ cell division protein		29331826, 29331827, 35696052, 29146499, 264905, 264906, 264681, 264288, 264689, 21906765, 264692, 35696423
2432	80083033 (4863, 4864)	Novel Protein sim. GBank gij3876367jembjCAA93287j - (Z69360) Weak similarity to Elmeria thrombospondin (PIR Acc. No. A45517); cDNA EST EMBL:M89266 comes from this gene; cDNA EST yk295b9.5 comes from this gene [Caenorhabditis elegans]		protease	264634, 264558
2433	80055092 (4865, 4866)	Novel Protein sim. GBank gij224593jdbjBAA20784j - (AB002324) KIAA0326 [Homo sapiens]	Contains protein domain (PF00086) - Zinc finger, C2H2 type	transcriptfactor	264569, 284905, 265018, 264762, 264683, 264691, 264556, 264557, 264639, 264558
2434	19520148 (4867, 4868)			UNCLASSIFIED	264553
2435	20759044 (4869, 4870)			UNCLASSIFIED	264555
2436	86044008 (4871, 4872)	Novel Protein sim. GBank gij1263289 (U47856) - fibroin-4 [Araneus diadematus]		UNCLASSIFIED	265008, 264758, 265010, 264689, 27485261, 263972, 18108374, 18108381
2437	83363424 (4873, 4874)	Novel Protein sim. GBank gij3641352 (AF091234) - putative transcription factor [Mus musculus]		UNCLASSIFIED	29331828, 265007, 265009, 265017, 264760, 264685, 264693, 264565
2438	94143473 (4875, 4876)	Novel Protein sim. GBank gij3660014 (AF091088) - unknown [Homo sapiens]	Contains protein domain (PF01256) - Uncharacterized protein family UPF0031	UNCLASSIFIED	29331826, 264508, 264905, 264509, 264906, 264907, 264908, 264909, 264511, 265008, 264512, 264910, 265009, 264591, 33657402, 21906754, 265011, 264760, 264764, 264685, 264686, 264768, 35695917, 33657023, 264693, 264631, 264632, 56182323, 264558, 83373044, 264563, 264564, 264565, 264566, 264567

2439	94850050 (4877, 4878)	Novel Protein sim. GBank gi 4263519 gb AAD153451 - (AC004044) small nuclear riboprotein Sm-D1 (Arabidopsis thaliana)	Contains protein domain (PF01423) - Sm protein	UNCLASSIFIED	60424179, 18108397, 56182575, 56181866, 56994075, 22278996, 3569286, 22278997, 22278999, 264259, 52645080, 29331822, 56182181, 29331824, 60424269, 86714117, 29331825, 60432289, 29331826, 29331827, 29331828, 35696052, 29146498, 264509, 264905, 264906, 52644045, 60431735, 33109954, 21906754, 33657084, 55811386, 52644296, 87188474, 265017, 265018, 265019, 18108351, 264448, 264288, 264768, 52644229, 56181562, 21906764, 21906765, 21906766, 21906767, 21906768, 21906769, 35695917, 33657023, 33657109, 33637182, 27486262, 27486264, 33657349, 27486265, 35695763, 18108370, 60431528, 263977, 55810764, 35696423, 65274791, 35695855, 60431850, 56182323, 60432113, 22279000, 22279002, 264567
2440	87641733 (4879, 4880)			UNCLASSIFIED	29331822, 29331824, 29331825, 29331827, 35696052, 264508, 264907, 264510, 265018, 265019, 264448, 264369, 265020, 265021, 58182323, 264639, 22279002
2441	87623914 (4881, 4882)	Novel Protein sim. GBank gi 3024889 sp P56524 Y288_HUMAN - HYPOTHETICAL PROTEIN KIAA0288 (HA6116)		UNCLASSIFIED	264488, 264629, 18108374, 264564
2442	87273590 (4883, 4884)	Novel Protein sim. GBank gi 4506013 ref NP_002703.1 pPPP1 - protein phosphatase 1, regulatory subunit 7	Contains protein domain (PF00560) - Leucine Rich Repeat	UNCLASSIFIED	22278996, 22278999, 29331822, 264768, 264693
2443	84305949 (4885, 4886)	Novel Protein sim. GBank gi 170658 sp Q02975 KID1_RAT - RENAL TRANSCRIPTION FACTOR KID-1 (TRANSCRIPTION FACTOR 17)	Contains protein domain (PF01352) - KRAB box	transcription factor	264906
2444	88086345 (4887, 4888)	Novel Protein sim. GBank gi 4758824 ref NP_004280.1 pNRF3 - nuclear factor (erythroid-derived 2)-like 3	Contains protein domain (PF00170) - bZIP transcription factor	transcription factor	264259, 18108382, 18108383, 18108385, 22279000
2445	87338636 (4889, 4890)	Novel Protein sim. GBank gi 2135950 pir J S58222 - PQ-rich protein - human			264259, 35696052, 264369, 18108361
2446	88059293 (4891, 4892)	Novel Protein sim. GBank gi 4753887 emb CAA05409.2 - (AJ002424) p65 protein [Rattus norvegicus]	Contains protein domain (PF00095) - WAP-type (Whey Acidic Protein) 'four-disulfide core'	proteaseinhib	265011, 264689, 33657023, 263981, 18108385
2447	94845149 (4893, 4894)	Novel Protein sim. GBank gi 4885613 ref NP_005409.1 pST5 - suppression of tumorigenicity 5		cadherin	56182575, 264259, 29331824, 29331825, 29331827, 60433356, 60433438, 264758, 265018, 264692, 65274620, 60431528, 65274791, 56182323

2448	87749680 (4895, 4896)			UNCLASSIFIED	22278996, 22278997, 22278999, 29331826, 3596052, 264107, 264110, 87168474, 87168559, 18108351, 21906767, 21906769, 27486262, 263976
2449	87869075 (4897, 4898)	Novel Protein sim. GBank gil728837 sp P39194 ALU7_HUMAN - IIII ALU SUBFAMILY SQ WARNING ENTRY IIII		cadherin	264259, 264828, 265007, 264595, 265021, 56528486
2450	96597784 (4899, 4900)			UNCLASSIFIED	264906
2451	91014563 (4901, 4902)	Novel Protein sim. GBank gil1710021 sp P35290 RB24_MOUSE - RAS-RELATED PROTEIN RAB-24 (RAB-16)	Contains protein domain (PF00071) - Ras family	glycoprotein	284093, 29331822, 29331824, 29331825, 66714117, 29331826, 29331828, 35696052, 264907, 66712502, 29331830, 264910, 265009, 264758, 265017, 265018, 264762, 264448, 264288, 21906767, 265021, 33657023, 264693, 33657109, 263969, 83373044, 18108385
2452	91230509 (4903, 4904)	Novel Protein sim. GBank gil1504034 dbj BAA13216 - (D86980) KIAA0227 [Homo sapiens]		isomerase	264102, 264112, 264688, 263972, 18108374, 83373044, 264563
2453	84201088 (4905, 4906)	Novel Protein sim. GBank gil2880079 (AC004142) - similar to murine leucine-rich repeat protein; possible role in neural development by protein-protein interactions; 93% similarity to D49802 (PID;g1369906) [Homo sapiens]	Contains protein domain (PF00560) - Leucine Rich Repeat	ngfirecep	264509, 264512, 18108385
2454	95310681 (4907, 4908)	Novel Protein sim. GBank gil1076802 pir S49915 - extensin like protein - maize	Contains protein domain (PF00170) - bZIP transcription factor	UNCLASSIFIED	263994, 66714117, 29331827, 264508, 264509, 264905, 264906, 264907, 264908, 264909, 264510, 264511, 264512, 265009, 264910, 264591, 264758, 264759, 265010, 265011, 264603, 264604, 264760, 264761, 264762, 18108351, 264764, 264765, 264766, 264686, 264768, 264769, 264534, 264691, 264692, 33657023, 264693, 33657109, 264628, 263976, 35695855, 264634, 264635, 264637, 264638, 264639, 83373044, 18108385, 264563, 264564, 264486
2455	95288301 (4908, 4910)	Novel Protein sim. GBank gil543817 sp P35585 AP47_MOUSE - CLATHRIN COAT ASSEMBLY PROTEIN AP47 (CLATHRIN COAT ASSOCIATED PROTEIN AP47) (GOLGI ADAPTOR AP-1 47 KD PROTEIN) (HA1 47 KD SUBUNIT) (CLATHRIN ASSEMBLY PROTEIN ASSEMBLY PROTEIN COMPLEX 1 MEDIUM CHAIN)	Contains protein domain (PF00328) - Adaptor complexes medium subunit family	glycoprotein	284488, 22278996, 264259, 35656052, 264905, 264906, 264907, 264908, 264909, 264510, 264512, 265008, 265009, 264910, 264591, 264592, 264593, 264594, 264758, 265019, 264760, 264681, 18108351, 264683, 264764, 18108354, 264766, 264768, 264769, 264689, 21906766, 21906767, 21906769, 29148629, 35695917, 265020, 265022, 33657023, 33657109, 18108370, 264628, 264629, 264631, 264632, 264635, 56182323, 60170394, 18108385, 264563, 264564, 264566, 264567
2456	88168700 (4911, 4912)	Novel Protein sim. GBank gil2588630 (AC003079) - Ankyrin like; 54% similar to 2022340A (NID:g1092123) in exons spanning 43974 to 11551 of clone. [Homo sapiens]	Contains protein domain (PF00023) - Ank repeat	kinase	264693

2457	94118375 (4913, 4914)	Novel Protein sim. GBank gij3025447 (AC004528) - R32184_3 [Homo sapiens]		UNCLASSIFIED	56181686, 264905, 264907, 264511, 264596, 55811386, 264682, 264684, 264685, 264687, 264691, 33657023, 264693, 35695855, 264636, 264555, 56182323, 264558, 56526486, 264563
2458	65675304 (4915, 4916)	Novel Protein sim. GBank gij2384942 (AF022985) - Similar to collagen [Caenorhabditis elegans]		UNCLASSIFIED	264691, 264693, 264634, 264559
2459	67551913 (4917, 4918)	Novel Protein sim. GBank gij5441942igb/AAD43187.1AC004997 supported by mouse EST AA538043 (NID:g2284036) [Homo sapiens]	Contains protein domain (PF00097) - Zinc finger, C3HC4 type (RING finger)	transport	27486265
2460	94315289 (4919, 4920)	Novel Protein sim. GBank gij4929701igb/AAD34111.1AF15187 - (AF151874) CGI-116 protein [Homo sapiens]		Kinase	65274572, 35696286, 22278996, 22278997, 60432049, 29331822, 29331824, 29331825, 66714117, 60432289, 29331826, 29331827, 29331828, 33656970, 29146499, 264102, 264109, 60433438, 265017, 265018, 265019, 264288, 21906765, 21906766, 21906769, 35695917, 265020, 264691, 33657023, 27486261, 18108374, 35695855, 87188518, 60432113
2461	87645147 (4921, 4922)	Novel Protein sim. GBank gij4426962igb/AAD20633 - (AF126062) Arf-like 2 binding protein BART1 [Homo sapiens]		UNCLASSIFIED	264259, 29331828, 264910, 18108351, 18108370, 18108374
2462	86998002 (4923, 4924)	Novel Protein sim. GBank gij5420387emb/CAB46679.1 - (AJ243459) proteophosphoglycan [Leishmania major]			264909, 264758, 264684, 18108374, 264637, 18108385
2463	84388543 (4925, 4926)	Novel Protein sim. GBank gij5052516igb/AAD38588.1AF14561 - (AF145613) BcDNA_GH03108 [Drosophila melanogaster]	Contains protein domain (PF00096) - Zinc finger, C2H2 type	UNCLASSIFIED	264681, 264566
2464	91219957 (4927, 4928)	Novel Protein sim. GBank gij5410300igb/AAD43021.1 - (AF100757) COP9 complex subunit 4 [Homo sapiens]	Contains protein domain (PF01399) - protease PCI domain		264489, 52646842, 22278995, 35696286, 22278996, 22278997, 22278999, 264259, 29331822, 29331824, 66714117, 29331825, 29331826, 29331827, 35696052, 29331828, 264509, 52644045, 264510, 264511, 264512, 265008, 60170831, 264593, 52646317, 33109954, 33657084, 265017, 265018, 265019, 264762, 264448, 264764, 264288, 264766, 21906765, 21906766, 21906767, 21906768, 21906769, 265021, 33657023, 33657109, 18108370, 18108381, 60170394, 18108385, 22279002, 264486

2465	95357483 (4928, 4930)	Novel Protein sim. GBank gjl4508401[ref NP_002871.1 pRAF-1 murine leukemia viral oncogene homolog 1	Contains protein domain (PF00069) - Eukaryotic protein kinase domain	oncogene	18108392, 52644507, 52645156, 52648365, 22278994, 22278995, 35696286, 22278996, 22278998, 264259, 29331822, 29331824, 29331825, 60424269, 60432289, 29331827, 35696052, 29331828, 264807, 29331830, 52644045, 264909, 56182435, 264511, 265007, 265008, 265009, 264910, 33657402, 60433438, 55812038, 21906754, 33109964, 265010, 265011, 87188559, 264600, 265017, 265018, 265019, 18108351, 264369, 264288, 264685, 264767, 21908765, 21906767, 21906768, 55811957, 35695917, 265020, 265021, 60170615, 52644150, 33657023, 52645129, 33657109, 27486261, 27486264, 35695763, 264628, 263972, 18108374, 35695855, 264636, 264637, 60170394, 56526486, 87188518, 60432113, 264563, 264564, 264566, 264487 264369
2466	85681388 (4931, 4932)	Novel Protein sim. GBank gjl4321619[gb AAD15788.1 - (AF051098) seven transmembrane domain orphan receptor [Mus musculus]			
2467	88059465 (4933, 4934)	Novel Protein sim. GBank gjl3513300 (AC005535) - F16801_1, partial CDS [Homo sapiens]		UNCLASSIFIED	56994075, 264908, 21906768, 33657023
2468	87614696 (4935, 4936)	Novel Protein sim. GBank gjl2143455[pir j58106 - gene DMR-N9 protein - mouse (fragment)]	Contains protein domain (PF00400) - WD domain, G-beta repeat	kinase	29331824, 52644045, 265008, 264910, 265019, 21906765, 21906769, 265021, 264288, 264628
2469	86294397 (4937, 4938)	Novel Protein sim. GBank gjl5420389[emb CAB46680.1 - (AJ243460) proteophosphoglycan [Leishmania major]		UNCLASSIFIED	264592, 264692, 264555, 264556, 264557, 264558, 264559, 18108385, 264482
2470	80223831 (4939, 4940)	Novel Protein sim. GBank gjl5419882[emb CAB46424.1 - (AL086749) DKFZp434G153 [Homo sapiens]		UNCLASSIFIED	65274572, 35696286, 29331827, 265007, 264592, 33109954, 265018, 265019, 264288, 55811957, 265020, 264693, 55811576, 56182323
2472	95060811 (4943, 4944)	Novel Protein sim. GBank gjl4928747[gb AAD34134.1 AF15189 - (AF151897) CGI-139 protein [Homo sapiens]		UNCLASSIFIED	264092, 60432049, 29331825, 60433356, 265010, 265011, 18108351, 264764, 264288, 264692, 65274620, 18108370, 18108372, 18108374, 264634, 18108385
2473	95421508 (4945, 4946)	Novel Protein sim. GBank gjl4539009[emb CAB39630.1 - (AL049481) putative protein [Arabidopsis thaliana]			60424179, 65274572, 22278999, 60424269, 29331826, 265008, 60433356, 60433438, 265010, 18108351, 264448, 264288, 264687, 264689, 265021, 264692, 65274620, 60431528, 65274791, 264556, 56182323, 60432113
2474	94315616 (4947, 4948)	Novel Protein sim. GBank gjl3252827 (AC004382) - Unknown gene product [Homo sapiens]			65274572, 56994075, 264259, 29331826, 60170831, 265017, 265018, 265019, 264683, 264369, 265020, 264693, 264563, 264564

2475	94321693 (4949, 4950)	Novel Protein sim. GBank gij1216486 (U48552) - HT protein [Cricetulus griseus]	Contains protein domain (PF00008) - EGF-like domain	lgf	264259, 29331822, 265006, 265007, 265010, 265011, 264448, 264288, 264369, 264685, 264686, 18108357, 264768, 18108362, 264693, 18108370, 18108374, 18108379, 35695423, 83373044, 18108383, 18108385, 264584, 264585, 264587
2476	94315618 (4951, 4952)	Novel Protein sim. GBank gij3252827 (AC004382) - Unknown gene product [Homo sapiens]		UNCLASSIFIED	264259, 60424269, 66714117, 264905, 265006, 264511, 265008, 265009, 264758, 265010, 265011, 18108351, 264681, 264369, 264288, 264689, 21906767, 265020, 18108374, 264639, 18108382, 83373044, 18108385, 87168518
2477	20718974 (4953, 4954)			UNCLASSIFIED	263978
2478	17659165 (4955, 4956)			UNCLASSIFIED	265017
2479	94314569 (4957, 4958)	Novel Protein sim. GBank gij1644232[dj]BAA11082] - (D67066) N-WASP [Bos taurus]		Im7	56994075, 22278999, 21906754, 264682, 21906765
2480	95295605 (4959, 4960)			UNCLASSIFIED	264905, 264907, 264765
2481	94718481 (4961, 4962)	Novel Protein sim. GBank gij5689469[dj]BAA83018.1] - (AB028989) KIAA1066 protein [Homo sapiens]		collagen	65274572, 56182575, 22278997, 264094, 264259, 29331822, 29331824, 66714117, 29331827, 35696052, 264508, 264905, 264908, 264907, 264908, 52644045, 264909, 56182435, 265008, 264910, 33657402, 55812038, 264758, 265010, 265011, 265017, 265018, 264760, 264762, 18108351, 264764, 264288, 264766, 264686, 264768, 21906768, 55811957, 265020, 264691, 264692, 264693, 264629, 55811576, 264630, 264634, 264635, 264636, 264637, 264556, 264558, 56182323, 83373044, 60432113, 22279002
2482	87393165 (4963, 4964)	Novel Protein sim. GBank gij321249[pir]S28407 - guanine nucleotide-exchange activator CDC25 homolog - mouse		UNCLASSIFIED	29331822, 29331824, 29331825, 29331827, 264508, 264905, 264509, 264906, 264907, 264908, 264511, 264591, 264768, 264693, 264631, 264632, 264636, 264638, 264639, 264563
2483	87731583 (4965, 4966)			UNCLASSIFIED	264488, 22278995, 264093, 264095, 60432049, 60433356, 60433438, 264448, 264288, 263967, 18108370, 18108385, 18108388, 264482
2484	94187774 (4967, 4968)	Novel Protein sim. GBank gij728831[sp]P39188[ALU1_HUMAN - III] ALU SUBFAMILY J WARNING ENTRY III!		Kinase	264563
2485	87786556 (4969, 4970)	Novel Protein sim. GBank gij1185397 (U25281) - SH3 domain binding protein [Rattus norvegicus]		UNCLASSIFIED	22278995, 22278996, 22278997, 22278999, 264259, 60432049, 29331824, 60432289, 29331827, 265007, 264910, 264593, 264600, 264603, 264604, 265019, 264448, 264288, 264685, 264686, 264768, 264689, 35695917, 265022, 264692, 264693, 56182323

2486	87748978 (4971, 4972)	Novel Protein sim. GBank gjl2662167[dj][BAA23715] - (AB007903) KIAA0443 [Homo sapiens]			265017, 264555
2487	95343105 (4973, 4974)	Novel Protein sim. GBank gjl464559[splP35287[R]B14_RAT RAS-RELATED PROTEIN RAB-14	Contains protein domain (PF00071) - Ras family	glycoprotein	22278996, 35696286, 22278997, 22278998, 22278999, 264092, 264259, 28331822, 35696052, 264106, 264905, 264907, 29331830, 264908, 265006, 264511, 265008, 265009, 60433438, 21906754, 33109954, 87168559, 265018, 264681, 264288, 264687, 21906785, 21906766, 21906767, 21906768, 21906769, 35695917, 265021, 265022, 264534, 33657023, 264692, 33657109, 263972, 18108377, 35698423, 35695855, 60170394, 18108385, 56526486, 22278000, 22279002, 264563, 264482, 264565, 20281169, 18108391
2488	87652451 (4975, 4976)			UNCLASSIFIED	264910, 264448, 264288, 264684, 264691, 264634
2489	82990585 (4977, 4978)	Novel Protein sim. GBank gjl4886439[emb][CAB43355.1] - (AL050253) hypothetical protein [Homo sapiens]	Contains protein domain (PF00084) - Sushi domain (SCR repeat)	complementrecept	264686, 264693, 55811576, 22279002
2490	88069609 (4979, 4980)	Novel Protein sim. GBank gjl2588624 (AC003083) - Rap2 interacting protein-like; similar to U73941 (PID:g1916018) [Homo sapiens]		UNCLASSIFIED	264907, 265008, 22279002
2491	91242116 (4981, 4982)	Novel Protein sim. GBank gjl728832[splP39189]ALU2_HUMAN - IIII ALU SUBFAMILY SB WARNING ENTRY IIII		Im7	264259, 29331826, 265008, 264762, 18108370, 18108376, 18108379
2492	95308202 (4983, 4984)	Novel Protein sim. GBank gjl3355303 (AF001549) - Unknown gene product [Homo sapiens]		transcriptfactor	264488, 22278998, 22278999, 29331828, 264591, 33109954, 265017, 55811150, 21906764, 21906768, 264692, 60431528, 87168518, 60432113, 22279000

2483	95422415 (4985, 4986)	Novel Protein sim. GBank gi 4240307 dbj BAA74932.1 - (AB020718) KIAA0909 protein [Homo sapiens]	Contains protein domain (PF01424) - struct R3H domain	18108394, 264887, 65274572, 56182575, 22278995, 56994075, 60432049, 29331822, 29331824, 29331825, 29331826, 29331827, 29146498, 264508, 264905, 264509, 264906, 264907, 29331830, 264909, 264510, 265006, 264511, 265007, 264512, 265008, 265009, 264910, 21906754, 265011, 264600, 265017, 265018, 264604, 264605, 265019, 55811150, 264762, 18108351, 264681, 264448, 264683, 264369, 264288, 18108355, 18108357, 264687, 21906765, 21906766, 21906767, 21906768, 21906769, 265020, 264691, 264692, 33657023, 33657349, 18108370, 18108374, 18108376, 55810764, 18108379, 65274791, 264630, 264632, 264634, 264635, 264636, 264555, 264637, 264557, 264558, 264639, 264559, 83373044, 18108385, 87168518, 60432113, 22279000, 22279002, 264482, 264586, 264488
2494	30793118 (4987, 4988)	Novel Protein sim. GBank gi 5420389 emb CAB46680.1 - (AJ243460) proteophosphoglycan [Leishmania major]	UNCLASSIFIED	collagen
2495	94234551 (4989, 4990)			
2496	80018765 (4991, 4992)	Novel Protein sim. GBank gi 4808220 emb CAB42832.1 - (AL022315) dJ117715.1 (PUTATIVE novel protein) [Homo sapiens]	struct	29147620, 264905, 265006, 265007, 18108348, 18108362, 18108370, 18108374, 264555, 264556, 18108381, 18108383, 18108388
2497	91723554 (4993, 4994)	Novel Protein sim. GBank gi 1200503 (U47924) - B [Homo sapiens]	UNCLASSIFIED	52644507, 22278996, 22278999, 29331824, 29331828, 33657402, 21906754, 87168474, 265019, 264369, 264689, 21906765, 21906766, 21906767, 21906768, 265020, 33657023, 18108376, 18108387
2498	87724633 (4995, 4996)		UNCLASSIFIED	29331827, 264512, 264910, 264288, 18108374, 35695855
2499	94685125 (4997, 4998)	Novel Protein sim. GBank gi 3510234 (AC005561) - R31237.1, partial CDS [Homo sapiens]	Contains protein domain (PF00069) - kinase Eukaryotic protein kinase domain	264909, 55812038, 264631, 264637, 264558

2500	94648324 (4989, 5000)	Novel Protein sim. GBank gi 3881275 emb CAA21725 - (AL032855) predicted using GeneFinder; similar to Inositol monophosphatase family; cDNA EST yk255e1.5 comes from this gene [Caenorhabditis elegans]	Contains protein domain (PF00459) - Inositol monophosphatase family	transport	52644507, 52645156, 22278895, 56994075, 35696286, 22278998, 264259, 52645080, 29331824, 29331825, 66714117, 60432289, 29331828, 29331827, 35696052, 29331828, 264508, 264509, 264510, 264512, 33657402, 60433438, 21906754, 52644296, 87168474, 87168559, 264603, 264661, 264448, 264683, 264288, 264369, 52644229, 264689, 21906765, 21906766, 21906767, 21906768, 21906769, 55811957, 35695917, 265020, 265021, 52644150, 33657023, 264693, 33657182, 35695783, 35696423, 35695855, 52644332, 83373044, 18108387, 87168518, 22279002
2501	94303896 (5001, 5002)	Novel Protein sim. GBank gi 4929615 gb AAD34088.1 AF15183 - (AF15183) CGI-73 protein [Homo sapiens]	Contains protein domain (PF00651) - BTB/POZ domain	dna_ma_bind	65274572, 56182575, 35696286, 22278998, 56994075, 22278997, 60432049, 264259, 29331822, 29331824, 29331826, 29331827, 35696052, 264905, 264908, 264907, 264908, 264909, 56182435, 264510, 264511, 265007, 264910, 264591, 60432229, 33657402, 60433356, 264595, 55812038, 264758, 264596, 87168474, 87168559, 264600, 264601, 264602, 265017, 264604, 265018, 264605, 265019, 18108351, 264448, 264369, 264288, 264766, 18108357, 21906765, 21906766, 21906767, 21906769, 29148629, 35695917, 264692, 33657023, 264629, 35696423, 55811576, 35695855, 264630, 264634, 264635, 264555, 264636, 264638, 264558, 60170394, 83373044, 18108385, 18108387, 87168518, 80432113, 22279002, 264566
2502	90983716 (5003, 5004)	Novel Protein sim. GBank gi 3041847 (AC004542) - OXYSTEROL-BINDING PROTEIN-like; similar to P22059 (PID.g129308) [Homo sapiens]	Contains protein domain (PF01237) - Oxysterol-binding protein	UNCLASSIFIED	65274572, 264907, 56182435, 265007, 264592, 264760, 18108351, 264448, 264369, 264288, 264694, 264686, 55811957, 265021, 264692, 33657109, 263973, 55811576, 264635, 264555, 264556, 264557, 264558, 56182323, 264559, 87168518, 264563, 264482
2503	87878345 (5005, 5006)	Novel Protein sim. GBank gi 2196874 emb CAA72638 - (Y11896) BRX protein [Mus musculus]			264905, 264907, 264512, 265008, 265011, 18108351, 264448, 264288, 29148627, 264693, 18108370, 18108374, 18108385

2504	87868706 (5007, 5008)	Novel Protein sim. GBank gi 550420 emb CAA48220 - (X68101) trg [Rattus norvegicus]			264488, 52644507, 52645156, 52646842, 22278994, 264259, 52645080, 29331822, 29331824, 29331825, 29331826, 29331827, 35696032, 264908, 264908, 52644045, 265009, 60433356, 33657402, 60433438, 264595, 33109954, 87168474, 265017, 265019, 264448, 264288, 264766, 52644229, 21906765, 21906766, 21906767, 21906768, 52644150, 264692, 27486261, 27486262, 27486264, 27486265, 35695763, 35696423, 35695855, 52644332, 56182323, 18108387, 87168518, 60432113, 22279002, 264564
2505	8760559 (5009, 5010)			UNCLASSIFIED	264605
2506	91232326 (5011, 5012)	Novel Protein sim. GBank gi 2137562 pi I49635 - mouse Dhml protein - mouse		nuclease	264488, 52644507, 52645156, 52646365, 65274572, 22278995, 56994075, 22278996, 22278997, 22278998, 22278999, 264259, 60432049, 29331822, 29331825, 29331826, 29331828, 264509, 56182435, 264112, 264593, 60433356, 55812038, 21906754, 265011, 265017, 265018, 265019, 264605, 264762, 18108351, 264448, 264288, 264768, 21906765, 21906766, 21906767, 21906768, 21906769, 35695917, 265020, 265021, 265022, 60170615, 33657023, 27486264, 18108378, 35695855, 264637, 83373044, 18108385, 87168518, 60432113, 22279000, 264563, 264482, 264565
2507	95316233 (5013, 5014)	Novel Protein sim. GBank gi 5174489 ref NP_006035.1 pKIAA - histone deacetylase 6	Contains protein domain (PF00850) Histone deacetylase family	histone	264488, 263994, 264592, 264595, 264369, 264686, 264768, 35695917, 35696423, 264563
2508	95315505 (5015, 5016)	Novel Protein sim. GBank gi 4826433 emb CAB42889.1 - (AL031447) dJ126A5.2.1 (novel protein) (isoform 1) [Homo sapiens]		UNCLASSIFIED	22278995, 22278999, 60432049, 264259, 29331828, 265006, 265007, 60433438, 33657084, 265010, 265017, 265018, 265019, 18108351, 264448, 18108354, 264369, 18108359, 21906765, 21906769, 55811957, 265020, 265022, 27486261, 33657349, 18108377, 35695855, 60432113, 22279002, 264563, 264585
2509	87813741 (5017, 5018)	Novel Protein sim. GBank gi 263289 (U47856) - fibroin-4 [Araneus diadematus]		UNCLASSIFIED	265007, 265008, 18108357, 264556, 264567

2510	95421378 (5018, 5020)	Novel Protein sim. GBank gij3293537[gb AAC25762.1] - (AF071059) zinc finger RNA binding protein [Mus musculus]			dna_ma_bind	65274572, 22278994, 22278996, 22278998, 22278999, 60432049, 264259, 29331822, 29331824, 29331825, 66714117, 60432289, 29331828, 33656970, 264908, 66712502, 265007, 264910, 60170831, 60432229, 60433356, 60433438, 21906754, 87168474, 265017, 265018, 264448, 264288, 21906767, 21906768, 21906769, 55811957, 35695917, 265020, 265022, 264691, 33657023, 264693, 65274820, 33657109, 33657182, 27486262, 33657349, 18108370, 35695855, 264555, 56182323, 83373044, 60432113, 22279002, 265017, 21906764, 265020, 264692
2511	87384281 (5021, 5022)	Novel Protein sim. GBank gij4323152[gb AAD16228.1] - (AF098863) Els-protein Spl-C [Mus musculus]				
2512	88084771 (5023, 5024)	Novel Protein sim. GBank gij4502075[ref NP_001135.1 pAMFR - autoclone motility factor receptor		Contains protein domain (PF000097) - Zinc finger, C3HC4 type (RING finger)	transport	22278999, 264259, 29331825, 29331826, 29146499, 264907, 264909, 265006, 265008, 264591, 60432229, 21906754, 264763, 264683, 264766, 18108357, 264689, 21906769, 264693, 18108370, 263972, 18108374, 264558, 22279000
2513	95357843 (5025, 5026)	Novel Protein sim. GBank gij3004657 (AF017777) - bobby sox [Drosophila melanogaster]			UNCLASSIFIED	60424179, 52645156, 18108394, 22278994, 35696286, 56994075, 22278996, 29331822, 29331824, 60424289, 29331825, 29331827, 33656970, 60431735, 33657084, 87168559, 265017, 264448, 264369, 56181562, 21906766, 21906767, 21906768, 21906769, 265020, 265021, 33657023, 18108366, 33657109, 27486281, 27486282, 33657349, 18108374, 55810764, 35696423, 56182323, 264558, 18108385
2514	88094578 (5027, 5028)	Novel Protein sim. GBank gij2258437 (AF008197) - syncollin [Rattus norvegicus]			UNCLASSIFIED	264510
2515	87994509 (5028, 5030)	Novel Protein sim. GBank gij3757727[emb CAA18783] - (AL022727) dJ80119.7 (olfactory receptor-like protein (hs6M1-3)) [Homo sapiens]		Contains protein domain (PF000001) - 7 transmembrane receptor (rhodopsin family)	tm7	
2516	87786908 (5031, 5032)				UNCLASSIFIED	264259, 29146498, 264905, 264288, 29148829, 35695917, 27486281, 264634
2517	87784966 (5033, 5034)	Novel Protein sim. GBank gij4220527[emb CAA23000] - (AL035356) putative protein [Arabidopsis thaliana]			UNCLASSIFIED	264091, 29331824, 29331825, 29331826, 29331828, 35696052, 264508, 264509, 264905, 264908, 264907, 264908, 264909, 264511, 264910, 33657402, 264757, 33109954, 265017, 265018, 264605, 264760, 264762, 264763, 264766, 264768, 264769, 33657109, 33657182, 264628, 55811576, 35696423, 264631, 264634, 264637, 264638, 264639, 87168518, 22279002, 264564

2518	84147410 (5035, 5036)	Novel Protein sim. GBank gi 4929591 gb AAD34056.1 AF15181 - (AF151819) CGI-61 protein [Homo sapiens]	Contains protein domain (PF00018) - SH3 domain	UNCLASSIFIED	35696286, 264259, 29331822, 29331824, 29331825, 60432289, 29331826, 29331827, 35696052, 29331828, 264907, 264909, 264511, 265007, 60432229, 60433356, 60433438, 55812038, 265010, 265017, 264448, 264288, 264689, 21906768, 21906769, 265022, 52644150, 264693, 18108370, 263972, 264555, 56182323, 83373044, 18108385, 60432113, 264088
2519	94326180 (5037, 5038)	Novel Protein sim. GBank gi 4263748 gb AAD15420 - (AC004883) similar to KIAA0766; similar to PID:g3882253 [Homo sapiens]		kinase	264259, 66714117, 29331826, 29331827, 29331828, 264907, 66712502, 265008, 265008, 264594, 265010, 265011, 265018, 264288, 21906769, 265020, 60431528, 55811576, 65274791, 264632, 264555, 264636, 22279002, 264564
2520	87413235 (5038, 5040)	Novel Protein sim. GBank gi 4826722 ref NP_005085.1 pFATP - fatty acid transport protein 4		transport	264259, 264908, 264910, 264682, 21906769, 265020, 264563
2521	95316244 (5041, 5042)	Novel Protein sim. GBank gi 5174489 ref NP_006035.1 pKIAA - histone deacetylase 6	Contains protein domain (PF00850) - Histone deacetylase family	histone	264488, 264489, 263994, 63274572, 22278995, 22278998, 264259, 29331822, 29331826, 264508, 264905, 264509, 264906, 264907, 66712502, 264511, 265006, 265007, 264591, 264592, 264593, 264594, 264595, 264596, 264681, 264448, 264763, 264682, 264764, 264684, 264369, 264288, 264685, 264686, 21906768, 55811957, 264692, 264693, 27486281, 18108370, 264628, 264629, 18108374, 55811576, 35696423, 35695855, 264632, 264558, 18108385, 65274727, 60432113, 264563, 264564, 264565, 264566, 264567
2522	87754052 (5043, 5044)	Novel Protein sim. GBank gi 4580011 gb AAD24201.1 U81002 - (U81002) TRAF4 associated factor 1 [Homo sapiens]		transport	264489, 22278997, 20281171, 21906754, 35695917, 263967, 263976, 263981, 20281169
2523	95340467 (5045, 5046)	Novel Protein sim. GBank gi 1809327 (U76374) - skm- BOP2 [Mus musculus]	Contains protein domain (PF01753) - MYND finger		263969
2524	95340469 (5047, 5048)				56994075, 22278996, 35696286, 22278997, 22278998, 22278999, 264259, 29331822, 29331824, 29331826, 29331828, 29331830, 56182435, 264512, 265008, 60170831, 33657402, 265010, 87168559, 265019, 264288, 21906765, 21906769, 35695917, 265020, 265021, 265022, 52644150, 264691, 33657023, 33657109, 27486281, 35696423, 65274791, 264559, 83373044, 56526486, 87168518, 264567

2525	94126928 (5049, 5050)	Novel Protein sim. GBank gij2073564 (U80223) - eukaryotic initiation factor eIF-2 alpha kinase; DGCN2 [Drosophila melanogaster]		kinase	264488, 22278997, 22278999, 60432049, 60432289, 29331828, 264905, 265008, 55812038, 21908754, 265019, 264369, 21908765, 21908766, 21908767, 21908769, 35695917, 265020, 265021, 33657109, 60431528, 83373044, 60432113, 22279000, 22279002, 264565
2526	95269404 (5051, 5052)	Novel Protein sim. GBank gij4589628[djb]BAA76836.1 - (AB023209) KIAA0992 protein [Homo sapiens]	Contains protein domain (PF00238) - Ribosomal protein L14	ribosomalprot	60424179, 284788, 264687, 264769, 264689, 65274572, 21908767, 56182575, 21908768, 21908769, 55811957, 22278994, 22278995, 35696286, 35695917, 22278996, 22278997, 265020, 22278998, 265021, 22278999, 265022, 264650, 264691, 60432049, 264259, 264097, 33657023, 29331822, 29331824, 60432289, 29331826, 29331827, 29331828, 27486262, 264508, 264509, 264905, 264907, 18108370, 66712502, 60431528, 264828, 264909, 18108372, 18108374, 56182435, 18108376, 55810764, 55811576, 35696423, 35695855, 265006, 265007, 264512, 265008, 265009, 264634, 264635, 60431850, 264636, 264555, 264592, 60431735, 264638, 33657402, 56182323, 60433356, 60433438, 264595, 55812038, 264598, 264758, 83373044, 52846317, 18108385, 33657084, 18108387, 55811386, 65274727, 56526486, 87168518, 60432113, 265017, 22279000, 265018, 265019, 264564, 18108351, 264448, 264566, 264288, 264486, 264567, 264768, 264510, 264512, 264630, 264591, 264592, 264259, 264594, 264595, 264603, 264605, 18108351, 264565, 264369, 18108354
2527	88094580 (5053, 5054)	Novel Protein sim. GBank gij2258437 (AF008197) - synollin [Rattus norvegicus]		UNCLASSIFIED	
2528	88078380 (5055, 5056)	Novel Protein sim. GBank gij2085786 (AC002086) - similar to zinc finger 5 protein from Gallus gallus, U51640 (PID:g1399185) [Homo sapiens]	Contains protein domain (PF00651) - BTB/POZ domain	dna_rna_bind	55812038, 265017, 264689, 35695917, 35695763, 60431528, 60432113, 22279002
2529	86670926 (5057, 5058)	Novel Protein sim. GBank gij3786433 (AF098505) - similar to Arabidopsis thaliana male sterility protein 2 (SW:Q08891) [Caenorhabditis elegans]		synthase	264908, 264769, 265020, 265021, 18108383
2530	80259978 (5059, 5060)				264369, 264556
2531	87768931 (5061, 5062)			UNCLASSIFIED	29331822, 29331824, 60432289, 264508, 264509, 264906, 265011, 264769, 21908768, 33657023, 87168518, 22279000
2532	87419778 (5063, 5064)	Novel Protein sim. GBank gij2864625[emb]CAA16972 - (AL021811) putative protein [Arabidopsis thaliana]			264593
2533	87000255 (5065, 5066)	Novel Protein sim. GBank gij437181 (U02289) - GTPase-activating protein [Caenorhabditis elegans]		UNCLASSIFIED	264555

2534	87332322 (5087, 5088)	Novel Protein sim. GBank gij3452473 (AF084205) - serine/threonine protein kinase TAO1 (Rattus norvegicus)		UNCLASSIFIED	264259, 35696052, 264905, 265017, 21906769, 265020, 265022, 33657109, 22279000
2535	91225056 (5069, 5070)	Novel Protein sim. GBank gij4468311 (emb CAB37992 - (AL031432) dJ465N24.2.1 (PUTATIVE novel protein) (isoform 1) [Homo sapiens])			55274572, 35696286, 60432289, 29331828, 66712502, 265006, 60432229, 265017, 265018, 265019, 264288, 264369, 264689, 21906768, 265020, 265021, 264636, 60170394, 22279002
2536	94218540 (5071, 5072)	Novel Protein sim. GBank gij728836spIP39193 ALU6_HUMAN - IIII ALU SUBFAMILY SP WARNING ENTRY IIII		kinase	18108398, 56182575, 35696286, 22278997, 22278999, 60432049, 264259, 29331824, 29331826, 29331827, 29331828, 264905, 264511, 265009, 264910, 264596, 52646317, 18108351, 264681, 264683, 18108354, 264288, 264687, 264769, 264689, 21906765, 21906766, 21906767, 265021, 52645129, 33657109, 18108374, 18108380, 56182323, 18108381, 18108388, 87168518, 60432113, 22279000, 22279002, 264587, 18108391
2537	95422283 (5073, 5074)	Novel Protein sim. GBank gij4557026 NP_003913.1 pHERC - guanine nucleotide exchange factor p32		ubiquitin	65274572, 35696286, 29331822, 29331825, 29331827, 29331828, 35696052, 264906, 66712502, 264909, 265008, 265011, 264760, 264288, 264685, 35695917, 60170615, 264691, 33657023, 65274620, 33657109, 18108374, 35696423, 35695855, 264636, 264558, 60170394, 56182323, 83373044
2538	36853454 (5075, 5076)			UNCLASSIFIED	
2539	94144918 (5077, 5078)			UNCLASSIFIED	22278996, 22278999, 29331822, 29331825, 29331828, 29146499, 264908, 264112, 60170831, 87168559, 264604, 265019, 264685, 264766, 87168518, 22279000, 264565, 264566
2540	94218545 (5079, 5080)	Novel Protein sim. GBank gij1362647 pir J53876 - sex-regulated protein janus A - fruit fly (Drosophila pseudoobscura)		UNCLASSIFIED	22278997, 29331828, 265008, 265009, 264758, 265010, 18108351, 264683, 264288, 21906765, 35695917, 265020, 18108374, 264567
2541	95308238 (5081, 5082)	Novel Protein sim. GBank gij1711858 sp P54797 T10_MOUSE - SER/THR-RICH PROTEIN T10 IN DGCR REGION		UNCLASSIFIED	264488, 264768, 264689, 264511, 20281171, 264634, 264635, 264691, 264639, 29331824, 264603, 264604, 264905, 264907, 264908, 264766

2542	95298162 (5083, 5084)	Novel Protein sim. GBank glij5225320[gb]A040850.1[AF083107] sirtuin type 2 [Homo sapiens]	Contains protein domain (PF00220) - Neurohypophyseal hormones, N- terminal Domain	UNCLASSIFIED	264488, 18108394, 52646365, 52646842, 65274572, 22278994, 35686286, 22278996, 264259, 52645080, 29331822, 29331824, 29331827, 35696052, 33656970, 264907, 264909, 52644045, 264510, 265008, 264512, 265007, 265008, 265009, 264910, 60431735, 52646317, 52644296, 265010, 265011, 265018, 265019, 18108351, 264683, 264288, 264685, 264687, 52644229, 264769, 21906766, 21906767, 21906769, 52644150, 33657023, 33657109, 52645129, 33657182, 27486261, 27486264, 33657349, 35695763, 18108374, 35696423, 35695855, 264631, 264634, 264635, 264558, 83373044, 18108385, 18108387, 87168518, 264563, 264564
2543	94139088 (5085, 5086)	Novel Protein sim. GBank glij5419857[emb]CAB46374.1] - (AL096723) hypothetical protein [Homo sapiens]	Contains protein domain (PF00076) - RNA recognition motif. (a.k.a. RRM, RBD, or RNP domain)		65274572, 56182575, 22278999, 264259, 29331826, 264907, 264510, 264511, 264592, 264595, 264764, 264369, 264288, 264684, 264766, 264689, 21906765, 21906767, 21906769, 60170615, 264692, 264693, 55811576, 65274791, 264636, 264556, 18108381, 60170394, 264639, 18108385, 60432113, 22279000
2544	84218549 (5087, 5088)	Novel Protein sim. GBank glij2498110[sp]Q63191[AE]G_RAT - APICAL ENDOSOMAL GLYCOPROTEIN PRECURSOR	Contains protein domain (PF00629) - MAM domain.	glycoprotein	18108397, 52646365, 22278997, 264259, 60432049, 29331822, 29331825, 29331826, 29331827, 29331828, 264905, 264908, 265006, 265007, 265008, 87168559, 265017, 265018, 265019, 18108351, 264448, 264686, 264687, 264689, 21906765, 265020, 265021, 18108370, 18108374, 18108376, 18108381, 18108385, 18108387, 56526486, 22279000, 264482, 264563, 264567
2545	87742645 (5089, 5090)	Novel Protein sim. GBank glij3327046[dbj]BA31591] - (AB014516) KIAA0616 protein [Homo sapiens]			29331825, 264906, 265009, 60170831, 265017, 264369, 21906767, 60170815, 264692, 33657109
2546	88093861 (5091, 5092)	Novel Protein sim. GBank glij2996032 (AF054586) - brain finger protein [Rattus norvegicus]	Contains protein domain (PF00097) - Zinc finger, C3HC4 type (RING finger)	UNCLASSIFIED	29331824, 265007, 22278002

2547	94143869 (5093, 5094)	Novel Protein sim. GBank gij4829607 gb AAD34064.1 AF15182 - (AF151827) CGI-69 protein [Homo sapiens]	Contains protein domain (PF00153) - Mitochondrial carrier proteins	transport	264488, 18108394, 52646842, 18108397, 56182575, 22278995, 56994075, 22278998, 22278997, 22278999, 264259, 29331822, 29331824, 29331826, 60432289, 29331827, 35896052, 29331828, 264104, 264508, 264905, 264906, 264908, 66712502, 264909, 56182435, 265006, 265007, 264512, 265008, 265009, 60170831, 60432229, 60431735, 264594, 60433438, 21906754, 52646317, 265010, 265011, 264600, 264601, 265018, 265019, 264760, 18108351, 264682, 264448, 264288, 264369, 264684, 264686, 264687, 56181562, 264688, 264689, 21905765, 21906766, 21906767, 21906768, 29148627, 21906769, 55811957, 265020, 265021, 265022, 264690, 264691, 18108362, 264692, 264693, 27485261, 18108370, 18108374, 55810764, 55811576, 35898423, 35695855, 264635, 264636, 264555, 264637, 263981, 264557, 18108380, 264638, 56182323, 264558, 264559, 83373044, 18108385, 87168518, 22279002, 264564, 264566, 264486
2548	88179079 (5085, 5086)			UNCLASSIFIED	264488, 18108394, 52646365, 22278994, 35896286, 56994075, 22278997, 22278999, 264259, 29331822, 29331824, 29331825, 29331826, 60432289, 29331827, 29331828, 56182435, 264511, 265007, 264512, 60433356, 87168559, 264684, 264369, 52644229, 265021, 33657023, 264692, 18108374, 52644332, 264557, 18108380, 18108381, 18108382, 18108384, 18108385, 60432113, 22279000, 22279002, 264563, 264567
2549	94196893 (5097, 5098)	Novel Protein sim. GBank gij728837 sp P39194 ALU7_HUMAN - IIII ALU SUBFAMILY SQ WARNING ENTRY IIII	Contains protein domain (PF00412) - LIM domain containing proteins	struct	56182575, 22278996, 22278997, 22278998, 22278999, 264259, 264508, 264908, 29331830, 265009, 265010, 265018, 264688, 21906764, 21906765, 21906766, 21906767, 21906769, 265020, 265021, 52644150, 264691, 18108368, 60431602, 18108376, 35896423, 56182323, 18108387, 264567
2550	87778584 (5089, 5100)	Novel Protein sim. GBank gjl2143886 pir 52523 - nucleoporin p62 homolog - rat (fragment)		UNCLASSIFIED	56182575, 29331822, 264105, 264512, 18108351, 35695917, 264637, 264638

2551	95308400 (5101, 5102)	Novel Protein sim. GBank gij4337103jgb AAD18079 - (AF128756) NG26 [Homo sapiens]	Contains protein domain (PF00561) - alpha/beta hydrolase fold	UNCLASSIFIED	18108396, 65274572, 22278995, 22278998, 22278999, 264259, 29331822, 29331824, 29331825, 60432289, 29331826, 29331827, 264905, 56182435, 265007, 60433438, 55812038, 21906754, 65274444, 265017, 265018, 264605, 265019, 264288, 21906766, 21906768, 21906769, 265020, 60170615, 264693, 33657109, 35698423, 264638, 56182323, 83373044, 22279000
2552	95332620 (5103, 5104)			UNCLASSIFIED	56182575, 35696286, 29331824, 29331826, 35696052, 29331828, 264508, 264907, 56182435, 265008, 264591, 33108954, 264760, 55811957, 35695917, 33657023, 33657109, 18108374, 55811576, 35696423, 35695855, 56182323, 264558
2553	95308243 (5105, 5106)	Novel Protein sim. GBank gij1711658 sp P54797 T10_MOUSE - SER/THR-RICH PROTEIN T10 IN DGCR REGION		UNCLASSIFIED	264686, 264488, 263976, 264768, 29331826, 35696052, 35696423, 264601, 264511, 264602, 264910, 264634, 264760, 264555, 264762, 264906, 264592, 264691, 264566, 264908, 264684, 264587, 264909, 264768 22278997, 29331822, 264508, 21906769, 33657023, 33657109, 56182323
2554	87761520 (5107, 5108)	Novel Protein sim. GBank gij728835 sp P39192 ALU5_HUMAN - III ALU SUBFAMILY SC WARNING ENTRY IIII		cadherin	
2555	87627551 (5109, 5110)	Novel Protein sim. GBank gij4884319 emb CAB43260.1 - (AL050084) hypothetical protein [Homo sapiens]		nuclease	29331824, 263972
2556	87645533 (5111, 5112)	Novel Protein sim. GBank gij4106984 (AC003038) - R30923_1 [Homo sapiens]	Contains protein domain (PF00514) - Armadillo/beta-catenin-like repeats	UNCLASSIFIED	22278998, 264509, 33657402, 264683, 264684, 264766, 264689, 33657023, 33657109, 35695855, 264558, 264567
2557	79437803 (5113, 5114)				264595
2558	87617591 (5115, 5116)	Novel Protein sim. GBank gij119110 sp P03211 EBN1_EBV - EBNA-1 NUCLEAR PROTEIN		UNCLASSIFIED	22278997, 29331824, 66714117, 29331825, 264906, 264511, 265018, 264448
2559	88096382 (5117, 5118)	Novel Protein sim. GBank gij4538998 emb CAB39619.1 - (AL049481) AIG1-like protein [Arabidopsis thaliana]		UNCLASSIFIED	22278997, 29331822, 29331828, 60433356, 265011, 264288, 264766, 264765, 264766, 264769, 21906765, 21906766, 60432113, 264482
2560	87994530 (5119, 5120)	Novel Protein sim. GBank gij5051399 emb CAB44995.1 - (AL078630) 573K1.3 (mm17M1-4 (novel 7 transmembrane receptor (rhodopsin family) (olfactory receptor LIKE protein)) [Mus musculus]	Contains protein domain (PF00001) - 7 transmembrane receptor (rhodopsin family)		
2561	88176575 (5121, 5122)	Novel Protein sim. GBank gij5326825 gb AAD42056.1 AF04495 - (AF044953) NADH:ubiquinone oxidoreductase PCIV subunit [Homo sapiens]		UNCLASSIFIED	22278995, 35696286, 22278996, 22278997, 22278998, 22278999, 264259, 29331822, 29331824, 29331826, 29331827, 29331828, 265007, 80432229, 87168559, 265017, 265018, 265019, 264689, 21906766, 21906769, 35695917, 265020, 33657023, 33657109, 18108374, 264634, 264559, 18108385, 87168518, 22279002

2562	87645539 (5123, 5124)	Novel Protein sim. GBank gij4106984 (AC003038) - R30923_1 [Homo sapiens]		UNCLASSIFIED	56994075, 22278996, 22278997, 22278998, 264259, 29331822, 60432289, 33657402, 60433356, 21906765, 55811957, 60170615, 33657023, 264693, 35695855, 87168518
2563	88095497 (5125, 5126)	Novel Protein sim. GBank gij4886447[emb]CAB43371.1] - (AL050270) hypothetical protein [Homo sapiens]		UNCLASSIFIED	264488, 35696286, 22278999, 264259, 29331822, 29331824, 35696052, 264508, 264907, 264908, 264909, 52644045, 264510, 264511, 265009, 264910, 264591, 264593, 33657402, 265017, 265018, 265019, 18108351, 264686, 21906767, 21906768, 55811957, 35695917, 265020, 264691, 264693, 27486262, 264628, 18108374, 35696423, 35695855, 264632, 264634, 264635, 264639, 264558, 18108384, 87168518, 22279000, 22279002, 264482, 264563, 264565, 264566, 264486
2564	80502783 (5127, 5128)	Novel Protein sim. GBank gij1352944[sp]P47179YJ9P_YEAST - HYPOTHETICAL 118.4 KD PROTEIN IN BAT2-DAL5 INTERGENIC REGION PRECURSOR		sulfotransferase	29331822, 265007, 265010, 265019, 264769, 55811576, 56182323
2565	85530906 (5129, 5130)	Novel Protein sim. GBank gij1352944[sp]P47179YJ9P_YEAST - HYPOTHETICAL 118.4 KD PROTEIN IN BAT2-DAL5 INTERGENIC REGION PRECURSOR		UNCLASSIFIED	66714117, 264909, 263978, 264632
2566	80224958 (5131, 5132)	Novel Protein sim. GBank gij628012[pir]A53933 - myosin I myr 4 - ral	Contains protein domain (PF00063) - Struct	Myosin head (motor domain)	18108370, 35695855, 264556, 264558, 18108383
2567	86143590 (5133, 5134)	Novel Protein sim. GBank gij466009[sp]P34548[YNJ4_CAEEL - HYPOTHETICAL 33.8 KD PROTEIN R10E11.4 IN CHROMOSOME III		synthase	265020, 60170615
2568	91233099 (5135, 5136)	Novel Protein sim. GBank gij466009[sp]P34548[YNJ4_CAEEL - HYPOTHETICAL 33.8 KD PROTEIN R10E11.4 IN CHROMOSOME III			60424179, 18108394, 56181686, 56994075, 22278999, 264490, 264259, 29331822, 56182181, 29331824, 60424269, 29331825, 29331826, 29331828, 264509, 29331830, 265007, 265008, 265009, 33657402, 265010, 265011, 265019, 264448, 264683, 264288, 18108354, 264769, 21906766, 21906767, 35695917, 265021, 33657023, 18108362, 33657109, 33657182, 35695763, 60431528, 55810764, 18108379, 83373044, 18108385, 60432113, 264482

2569	95313764 (5137, 5138)	Novel Protein sim. GBank gi 2599560 gb AABB4166.1 - (AF029874) basic leucine zipper protein LZIP (Homo sapiens)	Contains protein domain (PF00170) - bZIP transcription factor	transcription factor	18108394, 56182575, 56181686, 22278995, 22278996, 56994075, 35696286, 22278997, 22278998, 22278999, 264259, 60432049, 29331822, 56182181, 29331824, 29331825, 60432289, 29331826, 29331827, 29331828, 35696052, 264905, 264906, 56182435, 265008, 265009, 264910, 60432229, 284592, 60433356, 60433438, 21908754, 87168559, 265017, 265018, 265019, 264682, 264448, 264288, 21908765, 21908768, 21908767, 21908768, 29148627, 21908769, 35695917, 265021, 265022, 52644150, 264690, 264691, 264692, 264693, 65274620, 263967, 35695763, 20281069, 263974, 18108374, 55810764, 35696423, 35696555, 264558, 18108381, 56182323, 18108382, 83373044, 18108385, 56526486, 87168518, 22279000, 22279002, 264556
2570	94136754 (5139, 5140)	Novel Protein sim. GBank gi 4758954 ref NP_004567.1 pPPP2 - protein phosphatase 2 (formerly 2A), regulatory subunit B (PR 52), beta isoform	Contains protein domain (PF01240) - Protein phosphatase 2A regulatory subunit PR55	phosphatase	22278996, 29331822, 29331824, 66714117, 29331825, 60432289, 29331827, 35696052, 264907, 264510, 265007, 265009, 264758, 33109954, 265019, 264686, 264689, 265020, 265021, 264691, 264692, 264693, 18108374, 35695855, 264634, 56182323, 264639, 60170394, 83373044, 22279002, 264482
2571	87733750 (5141, 5142)	Novel Protein sim. GBank gi 732218 sp P34609 YO60_CAEEL - HYPOTHETICAL 128.6 KD PROTEIN ZK1098.10 IN CHROMOSOME III		struct	264508, 264905, 264907, 264828, 18108351, 264555, 264556, 264557, 264558, 264559
2572	87827560 (5143, 5144)	Novel Protein sim. GBank gi 48843 ref CAB43260.1 - (AL050084) hypothetical protein (Homo sapiens)		UNCLASSIFIED	35696286, 29331827, 35696052, 264100, 264104, 264110, 264592, 21908754, 29148627, 29148629, 263972, 263974, 18108374, 263976, 35695855, 60170394, 264559, 18108385

2573	85313929 (5145, 5146)	Novel Protein sim. GBank gi 399138 sp P02745 C1QA_HUMAN : COMPLEMENT C1Q SUBCOMPONENT, A CHAIN PRECURSOR	Contains protein domain (PF00386) - complement C1q domain	264488, 60424179, 65274572, 56182575, 56181886, 22278995, 56994075, 22278997, 60432049, 264259, 29331822, 29331824, 29331825, 60432289, 29331826, 29331827, 29331828, 264104, 264107, 264508, 264906, 29331830, 264909, 264510, 265006, 264512, 265008, 265009, 264910, 264591, 264592, 60432229, 264593, 60433356, 264594, 60433438, 264595, 55812038, 264759, 21906754, 87168474, 265010, 265011, 87168559, 265017, 265018, 265019, 264761, 264762, 264763, 264764, 264369, 264288, 264885, 264786, 264688, 264687, 264688, 264769, 56181562, 264689, 21906765, 21906766, 21906767, 29148627, 21906768, 21906769, 265020, 265021, 265022, 60170615, 264690, 52644150, 264691, 264692, 33657023, 65274620, 18108365, 18108368, 27486265, 60431602, 264629, 60431528, 263976, 65274791, 35695855, 20281071, 60431850, 264637, 264638, 264558, 264639, 58162323, 60170394, 83373044, 18108384, 87168518, 60432113, 264482, 264564, 264565, 264566, 264567, 22278995, 264259, 60432289, 29331827, 29331828, 33656970, 264908, 265008, 264910, 264591, 33657402, 265018, 265019, 264448, 264764, 264369, 264288, 18108357, 21906765, 21906766, 21906768, 55811957, 60170615, 264691, 33657023, 264693, 33657109, 33657182, 27486261, 27486264, 33657349, 264636, 264555, 83373044, 18108385, 264482
2574	84746814 (5147, 5148)	Novel Protein sim. GBank gi 3334982 (AC005306) - R27216_1 [Homo sapiens]	Contains protein domain (PF00651) - BTB/POZ domain	UNCLASSIFIED
2575	87754408 (5149, 5150)	Novel Protein sim. GBank gi 4929729 gb AAD34125.1 AF15188 (AF151888) CGI-130 protein [Homo sapiens]		UNCLASSIFIED
2576	95357881 (5151, 5152)	Novel Protein sim. GBank gi 468088 gb AAD27730.1 AF13295 (AF132955) CGI-21 protein [Homo sapiens]	Contains protein domain (PF00442) - Ubiquitin carboxyl-terminal hydrolases family 2	ubiquitin
2577	86996621 (5153, 5154)	Novel Protein sim. GBank gi 4337103 gb AAD18079 - (AF129756) NG26 [Homo sapiens]		UNCLASSIFIED
2578	87786941 (5155, 5156)			UNCLASSIFIED
2579	87292879 (5157, 5158)			UNCLASSIFIED

2580	88168788 (5159, 5160)	Novel Protein sim. GBank gij2588628 (AC003080) - Similar to KIAA0299, 60% similarity to AB002297 (PID:g2224539) [Homo sapiens]			265007, 265018, 264762
2581	87888048 (5161, 5162)	Novel Protein sim. GBank gij4406642 [gb] [AAD20048] - (AF131809) Unknown [Homo sapiens]	Contains protein domain (PF00595) - PDZ domain (Also known as DHR or GLGF).	collagen	56994075, 29331824, 29331826, 29331828, 264905, 60433356, 60433438, 264758, 87168559, 21908769, 265022, 35695855, 263981
2582	87786789 (5163, 5164)	Novel Protein sim. GBank gij2739367 (AC002505) - putative phosphatidylinositol-4-phosphate 5-kinase [Arabidopsis thaliana]		eph	264488, 264907, 264908, 264910, 264764, 264684, 264766, 264636, 264555, 264565
2583	91220950 (5165, 5166)	Novel Protein sim. GBank gij4378112 [emb] [CAA16521.1] - (AL021578) dJ453C12.2 (similar to transcription factor RBP-L) [Homo sapiens]	Contains protein domain (PF00047) - Immunoglobulin domain	transcript factor	56181886, 264259, 264510, 264512, 264591, 264592, 264593, 264594, 264595, 264596, 264603, 264629, 55810764, 264630, 264637, 264565
2584	80430941 (5167, 5168)			UNCLASSIFIED	264908, 264910, 264768, 264693, 18108374, 55811576, 56182323
2585	80436126 (5169, 5170)	Novel Protein sim. GBank gij2736151 (AF021935) - myotonic dystrophy kinase-related Cdc42-binding kinase [Rattus norvegicus]		kinase	264768
2586	91226136 (5171, 5172)				22278998, 264259, 29331822, 29331824, 29331827, 29331828, 264908, 265007, 265009, 264591, 60433356, 33657402, 265018, 264762, 264288, 21906766, 21906767, 21908769, 265022, 264691, 83373044, 56526486, 22278002
2587	80430943 (5173, 5174)				264908, 265019, 264768, 264693, 55811576, 56182323
2588	80074385 (5175, 5176)			UNCLASSIFIED	264564
2589	85515607 (5177, 5178)	Novel Protein sim. GBank gij3021598 [emb] [CAA71415] - (Y10389) nuclear protein [Xenopus laevis]		UNCLASSIFIED	35696052, 264905, 264908, 264907, 264908, 264909, 265009, 265018, 264769, 35696423, 264636
2590	87054526 (5178, 5180)	Novel Protein sim. GBank gij2104689 (U92793) - alpha glucosidase II, alpha subunit [Mus musculus]	Contains protein domain (PF01055) - Glycosyl hydrolases family 31	glucoamylase	22278995, 29331830, 265008, 265010, 265017, 264639
2591	941192167 (5181, 5182)	Novel Protein sim. GBank gij5702202 [gb] [AAD47189.1] [AF129166] long-chain acyl-CoA synthetase 5 [Homo sapiens]		eph	264259, 29331822, 264106, 264906, 56182435, 265007, 265008, 33109954, 264448, 55811957, 265020, 18108370, 55811576, 22279002

2592	95332648 (5183, 5184)	Novel Protein sim. GBank gi 3024998 sp Q60936 YAB1_MOUSE - HYPOTHETICAL HEART PROTEIN		transport	18108397, 56182575, 35696286, 56994075, 264259, 29331822, 29331824, 29331826, 60432289, 29331827, 29331828, 264906, 264909, 265007, 265008, 264910, 60432229, 264594, 60433356, 60433438, 55812038, 18108348, 21906754, 265011, 87168559, 265017, 265019, 264764, 264369, 264288, 264766, 265021, 60170615, 33657023, 33657109, 264629, 35698423, 35695855, 264557, 264638, 60170394, 56182323, 83373044, 56526486, 87168518, 264563, 264482, 264565
2593	87754416 (5185, 5186)	Novel Protein sim. GBank gi 4929729 gb AAD34125.1 AF15188 - (AF15188) CGI-130 protein [Homo sapiens]		Im7	22278999, 29331825, 264758, 21906754, 52646317, 265010, 18108351, 264288, 264369, 21906768, 264693, 18108370, 264637, 264638, 264482
2594	95305758 (5187, 5188)	Novel Protein sim. GBank gi 4929587 gb AAD34054.1 AF15181 - (AF15181) CGI-59 protein [Homo sapiens]		UNCLASSIFIED	264488, 18108398, 56182575, 35696286, 22278997, 264093, 264259, 29331822, 29331825, 66714117, 29331826, 264905, 264909, 52644045, 56182435, 264510, 264512, 265007, 264757, 21906754, 87168474, 265017, 264760, 264448, 264764, 264288, 264766, 264689, 21906768, 33657109, 263975, 263977, 264634, 264556, 60170394, 56182323, 56526486, 264482, 264563, 264564, 264566, 264567
2595	79561678 (5189, 5190)	Novel Protein sim. GBank gi 4309681 gb AAD15478 - (AC006930) R33423_1 [Homo sapiens]		UNCLASSIFIED	22278999, 264259, 265018, 264448, 265021, 60431528
2596	87538637 (5181, 5192)			UNCLASSIFIED	264906, 264509, 264908, 264762, 264766, 35695917, 35695855, 264635, 264636, 83373044, 264486
2597	94784089 (5193, 5194)			UNCLASSIFIED	22278998, 264259, 29331824, 87168474, 264683, 21906766, 35695917, 264691, 33657023, 33657109, 18108370, 18108374, 264564, 264565
2598	88094948 (5195, 5196)	Novel Protein sim. GBank gi 1001351 db BAA10838 - (D64008) hypothetical protein [Synecocystis sp.]		MHC	264766, 264769, 21906768, 33657182, 35695763, 18108370, 18108374, 264635, 264636, 56526486, 22279000, 264568
2599	87642889 (5197, 5198)	Novel Protein sim. GBank gi 3941737 (AF109719) - BAT2 [Mus musculus]		Contains protein domain (PF00400) - WD domain, G-beta repeat	35696286, 264093, 264288, 21906769, 35696423, 35695855
2600	87787846 (5199, 5200)	Novel Protein sim. GBank gi 4263521 gb AAD15347 - (AC004044) putative WD-repeat protein [Arabidopsis thaliana]			

2601	81243070 (5201, 5202)	Novel Protein sim. GBank gij728837 sp P39194 ALU7_HUMAN - IIII ALU SUBFAMILY SQ WARNING ENTRY IIII		kinase	56182575, 22278999, 264259, 29331822, 29331824, 60432289, 29331826, 29331827, 264908, 265007, 265008, 264591, 60433356, 33657402, 60433438, 21906754, 265011, 265018, 265019, 18108351, 264448, 264369, 21906769, 265020, 60170615, 264693, 33657109, 18108370, 18108376, 56182323, 18108381, 18108385, 22279002, 264563, 60433438, 21906754, 87168559, 264601, 264369, 264288, 21906767
2602	88180022 (5203, 5204)	Novel Protein sim. GBank gij4406632 gb AAD200471 - (AF131801) Unknown [Homo sapiens]			
2603	94325821 (5205, 5206)	Novel Protein sim. GBank gij3122387 sp Q61211 LIGA_MOUSE - LIGATIN		UNCLASSIFIED	264488, 65274572, 22278995, 22278996, 56994075, 22278997, 22278998, 22278999, 60432049, 264259, 29331822, 29331824, 60432289, 29331826, 29331827, 29331828, 35696052, 56182435, 284113, 265008, 265009, 60433356, 264757, 60433438, 264759, 33657084, 87168474, 265010, 265011, 87168559, 265017, 265018, 265019, 264448, 264683, 18108354, 264288, 264767, 264689, 21906765, 21906766, 21906767, 21906768, 21906769, 55811957, 265020, 265021, 265022, 60170615, 264691, 33657023, 264693, 33657109, 27486262, 18108374, 35696423, 65274791, 35695855, 264555, 264636, 264637, 56182323, 83373044, 56526486, 87168518, 60432113, 22279000
2604	94876601 (5207, 5208)	Novel Protein sim. GBank gij5454030 ref NP_006468.1 pRRP2 - RAS-related on Chromosome 22		oncogene	264259, 35696052, 264508, 264908, 264907, 264908, 264909, 264510, 264512, 265008, 264910, 33657402, 264604, 264605, 264762, 264763, 264682, 264764, 264683, 264768, 264769, 264689, 33657023, 264693, 18108365, 264628, 35696423, 264631, 264632, 264634, 264635, 264637, 18108381, 264639, 83373044, 264565
2605	94316756 (5209, 5210)	Novel Protein sim. GBank gij3628745 dbj BAA33356 - (AB013721) mllsugumin 23 [Oryctolagus cuniculus]		UNCLASSIFIED	22278998, 264490, 60432049, 264259, 60432289, 264909, 265008, 60433356, 60433438, 264758, 21908754, 265010, 265011, 265018, 264681, 18108351, 264288, 264766, 264685, 21906765, 21906766, 21906768, 21906769, 264691, 264692, 264693, 65274791, 264634, 264555, 264636, 22278996, 264510, 264512, 265009, 264768, 22279002, 264566
2606	87746406 (5211, 5212)				

2607	87627742 (5213, 5214)	Novel Protein sim. GBank gij4826626[gijAAD30202.1] - (AF135022) mediator (Homo sapiens)			29331822, 29331825, 29331826, 29331827, 29331828, 264906, 264907, 264908, 66712502, 264828, 56182435, 55812038, 265010, 265017, 265018, 265019, 264768, 264689, 21906765, 55811957, 265020, 265022, 264692, 33657023, 264693, 33657109, 18108370, 264639, 56182323, 264509, 264907, 264908, 264592, 264758, 264631
2608	81734786 (5215, 5216)	Novel Protein sim. GBank gij2226005 (U49973) - ORF2: function unknown [Homo sapiens]			
2609	94843791 (5217, 5218)	Novel Protein sim. GBank gij3024889[spIP56524]Y288_HUMAN - HYPOTHETICAL PROTEIN KIAA0288 (HA6116)	Contains protein domain (PF00850) - Histone deacetylase family	histone	264488, 65274572, 35696286, 22278997, 22278999, 60432049, 264259, 56182181, 29331824, 29331825, 29331826, 60432289, 29331827, 29331828, 264905, 264907, 60433356, 60433438, 55812038, 265011, 87168559, 265017, 265018, 264448, 264765, 264288, 264766, 264689, 21906765, 21908767, 21906769, 265020, 265021, 264691, 264692, 33657109, 27486261, 18108370, 65274791, 264636, 264556, 56182323, 18108385, 56528486
2610	88177654 (5219, 5220)	Novel Protein sim. GBank gij4336855[gijAAD17989] - (AF106473) leucine-rich-domain Inter-acting protein 1; LeR inter-acting protein 1; LEAP1 [Mus musculus]		transcription factor	18108394, 22278994, 56994075, 60432048, 264259, 29331822, 29331825, 60432289, 29331827, 264107, 264109, 264905, 56182435, 264112, 265006, 265007, 265008, 265009, 60433356, 60433438, 265011, 87168559, 265017, 264448, 264682, 264764, 264288, 265021, 33657023, 263967, 33657182, 27486261, 18108374, 263976, 55811576, 264638, 87168518, 60432113, 22278999, 265017, 264684, 21906768, 22279000
2611	87428890 (5221, 5222)	Novel Protein sim. GBank gij3876761[emb]CAA02994] - (268760) predicted using Genefinder; Similarity to Mouse FK506-binding protein (SW:FKB3_MOUSE) [Caenorhabditis elegans]	Contains protein domain (PF00254) - FKBP-type peptidyl-prolyl cis-trans isomerases	isomerase	
2612	87771188 (5223, 5224)	Novel Protein sim. GBank gij5679136[gijAAD46874.1]AF16093 - (AF160934) BcDNA.LD14189 [Drosophila melanogaster]		transport	265009, 264910, 264759, 265017, 21906767, 18108365, 18108388, 60432113
2613	79481496 (5225, 5226)			UNCLASSIFIED	264685
2614	87643948 (5227, 5228)	Novel Protein sim. GBank gij5533081[gijAAD45009.1]AF16118 - (AF161181) P55T protein [Mus musculus]	Contains protein domain (PF00625) - Guanylate kinase		22278998, 22278999, 29331825, 264508, 264906, 21906754, 264602, 264766, 264769, 52644229, 21908765, 33657109, 27486264, 18108370, 263972, 264555, 60432113
2615	87381998 (5229, 5230)			UNCLASSIFIED	264768, 18108394, 264692, 264693, 264508, 264509, 264907, 264628, 264908, 264909, 18108377, 264511, 264512, 264910, 264635, 264595, 265010, 264404, 264563, 264764, 264685, 264766

2616	87428895 (5231, 5232)	Novel Protein sim. GBank gjl3876761[emb CAA92994] - (Z88760) predicted using GeneFinder; Similarity to Mouse FKBP-type peptidyl-prolyl cis-trans isomerases [Caenorhabditis elegans]	Contains protein domain (PF00254) - FKBP-type peptidyl-prolyl cis-trans isomerases	isomerase	22278995, 22278997, 22278998, 60432049, 60432289, 264828, 60433358, 264594, 60433438, 33109954, 87168474, 265011, 265017, 265019, 264288, 264766, 21906765, 21906787, 265020, 265021, 18108376, 18108377, 18108387, 87168518, 264482, 264567
2617	86976888 (5233, 5234)	Novel Protein sim. GBank gjl728831[sp P39188 ALU1_HUMAN - III ALU SUBFAMILY J WARNING ENTRY III]		kinase	265010, 265019, 264369, 264693, 55811576, 22279002
2618	91231662 (5235, 5236)	Novel Protein sim. GBank gjl3319282 (AF049103) - Huntingtin interacting protein [Homo sapiens]	Contains protein domain (PF00397) - WW domain	UNCLASSIFIED	264489, 22278996, 264490, 264259, 29331822, 264102, 264509, 264906, 264907, 68712502, 29331830, 265008, 264910, 265009, 60433356, 60433438, 264758, 21908754, 265011, 87168559, 265017, 265018, 264369, 264288, 264766, 264768, 264689, 21906765, 21906766, 21906787, 35695917, 265020, 265022, 33657023, 264692, 33657109, 264628, 18108374, 35695855, 18108381, 83373044, 18108385, 18108388, 55526486, 264563
2619	87694000 (5237, 5238)	Novel Protein sim. GBank gjl2431772 (U66411) - putative type III alcohol dehydrogenase [Drosophila melanogaster]	Contains protein domain (PF00465) - Iron-containing alcohol dehydrogenases	dehydrogenase	264259, 60432289, 60433438, 21906754, 264369, 60432113, 264566
2620	95314841 (5239, 5240)	Novel Protein sim. GBank gjl4322567[gb AAD16097] - (AF090438) dachshund variant 1 [Mus musculus]	Contains protein domain (PF00628) - PHD-finger	UNCLASSIFIED	52644507, 52645156, 52645842, 65274572, 22278995, 58994075, 35868288, 22278999, 60432049, 264259, 52645080, 29331822, 29331824, 29331825, 29331826, 29331828, 35696052, 264907, 68712502, 265008, 60433356, 33657402, 52646317, 21906754, 87168474, 265010, 265017, 265018, 264448, 264369, 264288, 264687, 264768, 52644228, 264688, 264689, 21908765, 21908768, 35695917, 52644150, 264692, 33657109, 35695763, 35696423, 264556, 52644332, 18108382, 83373044, 18108385, 18108387, 65274727, 87168518, 60432113, 22279002, 264594, 264636
2621	80253495 (5241, 5242)	Novel Protein sim. GBank			264488, 264906, 264907, 264908, 264512, 265007, 264758, 35695917, 264634, 264636, 264563, 264482
2622	81780390 (5243, 5244)	gj14557341[ref NP_001174.1 pATP6 - ATPase, H+ transporting, lysosomal subunit 1; vacuolar proton pump; H-ATPase subunit]			
2623	91639306 (5245, 5246)	Novel Protein sim. GBank gjl3880355[emb CAB05299] - (Z82285) predicted using GeneFinder [Caenorhabditis elegans]		UNCLASSIFIED	29331824, 35696052, 265007, 265010, 264288, 29148629

2624	81638308 (5247, 5248)	Novel Protein sim. GBank gi 3880355 emb CAB05299 - (Z82285) predicted using GeneFinder [Caenorhabditis elegans]		UNCLASSIFIED	56181686, 22278996, 22278997, 22278998, 22278999, 264259, 29331822, 29331824, 56182181, 29331825, 60432289, 29331828, 35696052, 29146489, 66712502, 52644045, 265007, 265008, 60433356, 33109954, 21906754, 265010, 265011, 265019, 264448, 264288, 21906765, 21906766, 21906767, 29148629, 35695917, 265021, 265022, 27486265, 18108370, 60431528, 55811576, 35695855, 56182323, 18108385, 87168518, 22279002, 18108391
2625	86452068 (5249, 5250)	Novel Protein sim. GBank gi 2887429 dbj BAA24857 - (AB007887) KIAA0427 [Homo sapiens]		UNCLASSIFIED	264091, 264511, 263981
2626	16533797 (5251, 5252)	Novel Protein sim. GBank gi 487416 (L20302) - actin filament protein [Gallus gallus]		struct	265008
2627	87636823 (5253, 5254)	Novel Protein sim. GBank gi 88462 pir A27307 - proline-rich phosphoprotein (gene PRH1, Db allele) - human		UNCLASSIFIED	22278996, 265007, 265009, 264448, 21906767, 265021, 264558, 87168518
2628	94848254 (5255, 5256)	Novel Protein sim. GBank gi 3123552 emb CAA18609 - (AL022578) dJ393P12.2 (hypothetical Proline-rich protein KIAA0269 LIKE) [Homo sapiens]		UNCLASSIFIED	22278997, 22278999, 264259, 60432049, 29331822, 29331824, 29331825, 29331827, 35696052, 29331828, 264907, 264909, 265008, 264591, 60433356, 60433438, 265010, 265017, 265018, 264389, 264288, 18108357, 21906765, 21906768, 265022, 65274791, 264638, 18108387, 87168518, 22279002
2629	87376490 (5257, 5258)	Novel Protein sim. GBank gi 4929595 gb AAD34058.1 AF15182 - (AF151821) CGI-63 protein [Homo sapiens]		synthase	29331825, 29331826, 264102, 265006, 264766, 35695917, 264691, 33657023, 263972, 18108374, 22279000
2630	78188364 (5259, 5260)			UNCLASSIFIED	264636, 18108385
2631	94845909 (5261, 5262)	Novel Protein sim. GBank gi 321605 pir JQ1161 - Gag protein - Visna virus (strain EV1)	Contains protein domain (PF00098) - Zinc finger, CCHC class	UNCLASSIFIED	52644507, 52645158, 52646365, 52646842, 22278994, 22278995, 35696286, 56994075, 22278997, 22278999, 264259, 52645080, 29331822, 29331824, 29331825, 29331826, 29331827, 29331828, 35696052, 33656970, 264905, 264509, 264907, 264908, 264511, 264512, 265007, 265008, 264910, 52646317, 33657084, 52644296, 265010, 87168559, 265017, 265018, 265019, 264760, 264762, 264448, 264288, 264369, 264766, 264768, 52644229, 21906764, 21906765, 21906766, 21906767, 21906769, 35695917, 265020, 52644150, 33657023, 52645129, 33657109, 33657182, 27486261, 27486262, 27486265, 33657349, 35695763, 35696423, 65274791, 35695855, 264634, 264637, 52644332, 56182323, 60432113, 264566, 264486, 264685
2632	36730414 (5263, 5264)				

2633	95011617 (5265, 5266)	Novel Protein sim. GBank gij113954[id]BAA10889] - (D84009) seizure-related gene product 8 type 2 precursor [Mus musculus]	Contains protein domain (PF00084) - Sushi domain (SCR repeat)	22278995, 22278997, 22278998, 264259, 29331822, 29331824, 29331825, 29331827, 264508, 264906, 265006, 265007, 265008, 265009, 55812038, 33657084, 55811388, 265010, 265011, 87188559, 265018, 265019, 264693, 264288, 264886, 29148629, 33657023, 264693, 33657182, 35695763, 55811578, 264639, 56182323, 83373044, 18108385, 56526486, 87168518, 22279000, 22279002, 264565
2634	87330921 (5267, 5268)	Novel Protein sim. GBank gij544161[emb]CAB46854.1] - (AJ388555) hypothetical protein [Canis familiaris]	UNCLASSIFIED	29331826, 263972, 264089
2635	86623144 (5269, 5270)	Novel Protein sim. GBank gij4680663[gb]AAD27721.1[AF132946] CGI-12 protein [Homo sapiens]		22278997, 264259, 29331824, 66714117, 29331827, 29331828, 264907, 33657084, 265017, 265018, 264448, 264288, 21906766, 21906767, 21906768, 29148629, 18108376, 55811576, 35695855, 87168518, 22279000, 264569, 29331822, 29331828, 265006, 60170831, 264681, 264765, 264685, 29148627, 21906769, 29148784, 265022, 60170815, 264635, 18108385, 56526486, 22279002, 264567
2636	87260534 (5271, 5272)	Novel Protein sim. GBank gij3879146[emb]CAB07846] - (Z03368) Similarity to Yeast hypothetical 52.9 KD protein (SW:P43616); cDNA EST EMBL:M89432 comes from this gene; cDNA EST EMBL:D71008 comes from this gene; cDNA EST EMBL:D73578 comes from this gene; cDNA EST EMBL:D69025 comes ...	Contains protein domain (PF01546) - Peptidase family M20/M25/M40	264488, 264489, 52644507, 264887, 52646365, 52646842, 22278994, 22278996, 22278999, 20281171, 264259, 29331822, 52645080, 66714117, 29331825, 29331826, 29331827, 35696052, 29331828, 29146498, 264508, 264905, 264906, 264907, 264908, 264909, 264511, 264512, 264910, 264591, 264592, 60432229, 264593, 264594, 33657402, 60433356, 264757, 60433438, 264596, 264758, 52646317, 21906754, 52644286, 265010, 264600, 264602, 264603, 264605, 264761, 264762, 264681, 264448, 264764, 264765, 264288, 264766, 264686, 264768, 264687, 264769, 21906765, 21906768, 21906767, 21906768, 21906769, 35695917, 265021, 60170815, 264691, 33657023, 264692, 264693, 65274620, 27486264, 18108370, 264628, 264629, 18108374, 35696423, 35695855, 264632, 264634, 264635, 264637, 264638, 52644332, 264639, 264658, 83373044, 60432113, 264564, 264565, 264566, 264486, 264567
2637	95011299 (5273, 5274)	Novel Protein sim. GBank gij4758208[ref]NP_004081.1[pDUSP - dual specificity phosphatase 3 (vaccinia virus phosphatase VH1-related)	Contains protein domain (PF00782) - Dual specificity phosphatase, catalytic domain	

2638	94326733 (5275, 5276)	Novel Protein sim. GBank gi 4929689 gb AAD34105.1 AF151868 - (AF151868) CGI-110 protein [Homo sapiens]	Contains protein domain (PF00076) - RNA recognition motif (a.k.a. RRM, RBD, or RNP domain)	UNCLASSIFIED	60424179, 52844507, 52646842, 18108398, 56182575, 22278995, 22278996, 35696288, 22278997, 22278998, 264259, 60432049, 29331822, 60424289, 29331826, 35696052, 29146498, 264905, 52644045, 56182435, 60433356, 33657402, 55812038, 55811386, 265019, 264288, 264769, 52644229, 56181562, 29148827, 29148829, 55811957, 29148784, 35695917, 265021, 52644150, 33657023, 65274620, 33657109, 35695763, 18108374, 55810764, 35696423, 55811576, 35695855, 60431850, 56182323, 60432113, 264404
2639	95361348 (5277, 5278)	Novel Protein sim. GBank gi 2190007 dbj BA203551 - (AB004109) phosphatidylserine synthase II [Cricetus griseus]		synthase	264488, 29331825, 35696052, 264508, 264509, 264909, 264512, 33657402, 60433438, 264758, 85658542, 264600, 265020, 265021, 33657109, 264628, 35696423, 264555, 264639, 264563, 264564, 264565, 264566, 264486
2640	87781330 (5279, 5280)	Novel Protein sim. GBank gi 3158516 (AF067617) - contains similarity to chromo (chromatin organization modifier) domains (Pfam: chromo.hmm, score: 17.76 and 27.94) and to helicases conserved C-terminal domain (Pfam: helicase_C.hmm, score: 67.00) [Caenorhabditis elegans]	Contains protein domain (PF00271) - Helicases conserved C-terminal domain	helicase	29331822, 29331826, 264906, 33109954, 265017, 265019, 21906768, 35695763, 264636, 264637, 18108387
2641	11669834 (5281, 5282)	Novel Protein sim. GBank gi 2564955 (AF030001) - unknown [Mus musculus]		UNCLASSIFIED	264828
2642	87412575 (5283, 5284)			UNCLASSIFIED	264259, 29331822, 33657402, 265019, 264369, 264691, 264634, 56526486, 22279002
2643	87843981 (5285, 5286)	Novel Protein sim. GBank gi 4490304 emb CA838795.1 - (AL035678) putative protein [Arabidopsis thaliana]	Contains protein domain (PF00270) - DEAD/DEAH box helicase	helicase	22278997, 264259, 29148499, 56182435, 264910, 265010, 18108351, 264682, 264683, 264369, 264684, 264685, 264686, 29148627, 264690, 33657109, 18108370, 263973, 18108374, 264634, 264557, 264558, 18108385, 264482
2644	88177671 (5287, 5288)	Novel Protein sim. GBank gi 3789797 gb AAC67502.1 - (AF059569) actin binding protein MAYVEN [Homo sapiens]	Contains protein domain (PF00651) - BTB/POZ domain	nucL_rept	264107, 264687
2645	17277228 (5289, 5290)	Novel Protein sim. GBank		UNCLASSIFIED	265007
2646	94146542 (5291, 5292)	gi 1708722 sp P49749 EVX2_MOUSE - HOMEBOX EVEN SKIPPED HOMOLOG PROTEIN 2 (EVX-2)		UNCLASSIFIED	264909, 264687, 264632, 83373044

2647	91212978 (5283, 5284)			UNCLASSIFIED	56182575, 22278996, 35696286, 22278998, 264259, 29331822, 56182181, 29331825, 60424269, 60432289, 35696052, 66712502, 264908, 265007, 55812038, 33109954, 21906754, 33657084, 265019, 264448, 264288, 56181562, 21906765, 21906768, 21906768, 21906769, 35695917, 265020, 265021, 52644150, 264693, 33657109, 33657349, 60431528, 18108374, 55810784, 35696423, 56182323, 60432113, 22279002, 264564
2648	87600587 (5295, 5296)				29146498, 56182435, 33109954, 265011, 264682, 55811957, 35695917, 264690, 263976, 18108377, 35696423, 60432113
2649	94128783 (5297, 5298)	Novel Protein sim. GBank gij3041852 (AC004539) - unknown function; similar to Y09105 (PID:g1666171) [Homo sapiens]		UNCLASSIFIED	56182575, 35696286, 22278998, 29331824, 29331826, 60432289, 66712502, 56182435, 60170831, 60432229, 33657402, 33109954, 21906754, 265017, 264686, 264688, 21906765, 21906768, 60170815, 264693, 263967, 18108370, 263976, 60170394, 60432113, 22279002, 264563, 264685
2650	87297533 (5299, 5300)	Novel Protein sim. GBank gij5360271[dbj BAA81808.1] - (AB029335) HrPET-3 [Halocynthia roretzi]			
2651	88088745 (5301, 5302)	Novel Protein sim. GBank gij4240225[dbj BAA74891.1] - (AB020675) KIAA0868 protein [Homo sapiens]	Contains protein domain (PF000054) - synthase Laminin G domain		29331824, 29331826, 29331827, 265007, 55812038, 21906754, 18108366, 18108384, 22279002, 264567
2652	10343125 (5303, 5304)	Novel Protein sim. GBank gij4493956[emb CAB11123.2] - (Z98551) predicted using hexExon; MAL3P6.28 (PFC0845c), Hypothetical protein, len: 167 aa; Similarity to model organism hypothetical proteins (C.elegans, D.melanogaster, S.cerevisiae & S.pombe), C.elegans protein ZK287.5 (TR....		UNCLASSIFIED	264692
2653	87798735 (5305, 5306)			UNCLASSIFIED	265018, 18108370, 18108387, 264566
2654	95103240 (5307, 5308)				60424179, 65274572, 56182575, 264259, 56182181, 264908, 56182435, 55811957, 35695917, 265021, 263976, 55810764, 65274791, 56182323, 83373044, 65274727
2655	91229018 (5309, 5310)	Novel Protein sim. GBank gij3875272[emb CAB02861] - (Z81051) predicted using GeneFinder; similar to Zinc finger, C3HC4 type (RING finger); cDNA EST yk443h5.3 comes from this gene; cDNA EST yk443h5.5 comes from this gene [Caenorhabditis elegans]	Contains protein domain (PF000097) - Zinc finger, C3HC4 type (RING finger)	transcription factor	56182575, 56181686, 264092, 264259, 56182181, 60432289, 264907, 33657402, 55812038, 21906754, 87168559, 265017, 264448, 264369, 264288, 21906765, 21906766, 21906767, 21906768, 33657109, 18108370, 264628, 55811576, 264556, 264639, 83373044, 56526486, 264404, 60432113, 264693
2656	84562601 (5311, 5312)	Novel Protein sim. GBank gij3043718[dbj BAA24552] - (AB011189) KIAA0597 protein [Homo sapiens]			

2657	52561728 (5313, 5314)	Novel Protein sim. GBank gl 5689509 dbj BAA83038.1 - (AB029009) KIAA1086 protein [Homo sapiens]		dna_rna_bind	264693
2658	88082454 (5315, 5316)	Novel Protein sim. GBank gl 3688089 (AC005757) - R32811_1 [Homo sapiens]	Contains protein domain (PF00560) - Leucine Rich Repeat	nucleaseinhib	35696286, 264259, 29331822, 29331824, 29331828, 29331828, 265019, 264683, 21908768, 35695917, 264693, 35695855, 264637, 87168518, 264486, 264567, 264909, 264910, 265018, 264369, 264769, 21906769, 264693, 263972, 18108388, 264488, 65274572, 35698286, 22278998, 22278999, 264259, 29331822, 29331824, 60432289, 29331826, 35696052, 264908, 56182435, 265008, 265009, 60433356, 264594, 265010, 265018, 55811150, 18108351, 264682, 264684, 264369, 264288, 264687, 21906765, 29148784, 35695917, 60170615, 52644150, 33657023, 33657109, 35696423, 35695855, 264556, 60170394, 18108385, 22279000, 22279002
2659	87600755 (5317, 5318)	Novel Protein sim. GBank gl 5420387 emb CAB46679.1 - (AJ243459) proteophosphoglycan [Leishmania major]	Contains protein domain (PF01426) - BAH domain	UNCLASSIFIED	264909, 264910, 265018, 264369, 264769, 21906769, 264693, 263972, 18108388, 264488, 65274572, 35698286, 22278998, 22278999, 264259, 29331822, 29331824, 60432289, 29331826, 35696052, 264908, 56182435, 265008, 265009, 60433356, 264594, 265010, 265018, 55811150, 18108351, 264682, 264684, 264369, 264288, 264687, 21906765, 29148784, 35695917, 60170615, 52644150, 33657023, 33657109, 35696423, 35695855, 264556, 60170394, 18108385, 22279000, 22279002
2660	91718472 (5319, 5320)	Novel Protein sim. GBank gl 728837 sp P39194 ALU7_HUMAN - III ALU SUBFAMILY SQ WARNING ENTRY III	Contains protein domain (PF00036) - EF hand	kinase	264909, 264910, 265018, 264369, 264769, 21906769, 264693, 263972, 18108388, 264488, 65274572, 35698286, 22278998, 22278999, 264259, 29331822, 29331824, 60432289, 29331826, 35696052, 264908, 56182435, 265008, 265009, 60433356, 264594, 265010, 265018, 55811150, 18108351, 264682, 264684, 264369, 264288, 264687, 21906765, 29148784, 35695917, 60170615, 52644150, 33657023, 33657109, 35696423, 35695855, 264556, 60170394, 18108385, 22279000, 22279002
2661	95342817 (5321, 5322)	Novel Protein sim. GBank gl 4758048 ref NP_004739.1 pCPR8 - cell cycle progression 8 protein		glycoprotein	60432049, 264259, 29331824, 29331825, 29331826, 29331827, 29331828, 264908, 264909, 264593, 33109954, 265010, 265017, 265018, 265019, 264760, 264448, 264369, 264288, 21906765, 21906768, 265022, 264691, 33657023, 27486262, 60431528, 18108374, 35695855, 18108388, 264482, 264555, 264556, 264558, 264486, 264908, 264909, 264757, 264758, 264767, 264691, 33657023, 264638
2662	80228739 (5323, 5324)	Novel Protein sim. GBank gl 3874714 emb CAA91263 - (Z66494) similar to choline dehydrogenase; cDNA EST yk346d5.5 comes from this gene; cDNA EST yk346d5.3 comes from this gene [Caenorhabditis elegans]		dehydrogenase	264555, 264556, 264558, 264486, 264908, 264909, 264757, 264758, 264767, 264691, 33657023, 264638
2663	87780623 (5325, 5326)	Novel Protein sim. GBank gl 1389670 (U58977) - Notch homolog Scalloped wings [Lucilia cuprina]	Contains protein domain (PF00008) - EGF-like domain	oncogene	35696286, 264509, 264595, 264288, 264685, 264686
2664	85518329 (5327, 5328)	Novel Protein sim. GBank gl 4884408 emb CAB43311.1 - (AL050190) hypothetical protein [Homo sapiens]		UNCLASSIFIED	35696286, 22278999, 29331822, 35696052, 264908, 264907, 264909, 264510, 264511, 264512, 264593, 60433438, 265019, 264681, 21906765, 21906766, 21906767, 21906768, 265020, 265022, 35696423, 35695855, 22279002, 264482, 264486
2665	87770662 (5329, 5330)	Novel Protein sim. GBank gl 17533 RNPH_CAEEL - RIBONUCLEASE PH-LIKE PROTEIN B0584.1		UNCLASSIFIED	29331825, 265007, 264910, 60432229, 265019, 264288, 21906767, 264558, 22279002
2666	87826472 (5331, 5332)	Novel Protein sim. GBank gl 5108956 gb AAD39906.1 AF11361 - (AF113615) FH1/FH2 domain-containing protein FHOS [Homo sapiens]		UNCLASSIFIED	264907, 29331830, 264681, 264683, 264288, 35695855, 264632, 264558, 264557, 264558, 264559, 264563, 264565, 264567
2667	87422720 (5333, 5334)	Novel Protein sim. GBank gl 2500570 sp Q17533 RNPH_CAEEL - RIBONUCLEASE PH-LIKE PROTEIN B0584.1	Contains protein domain (PF01138) - 3' exoribonuclease family	nuclease	264907, 29331830, 264681, 264683, 264288, 35695855, 264632, 264558, 264557, 264558, 264559, 264563, 264565, 264567

2668	91218718 (5335, 5336)	Novel Protein sim. GBank gi 5454186 ref NP_006327.1 pZYG - ZYG homolog		UNCLASSIFIED	56181688, 35696286, 22278998, 22278999, 56182181, 29331824, 60424269, 29331825, 35696052, 29331828, 66712502, 56182435, 60433356, 264758, 21906754, 55811388, 265011, 87168559, 265017, 265018, 55811150, 264448, 264369, 264288, 21906765, 21906766, 21906768, 55811957, 35695917, 265020, 265021, 33657023, 264692, 33657109, 35695763, 60431528, 18108374, 35696423, 55811576, 264634, 60431850, 83373044, 18108385, 87168518, 22279000, 264583, 264564
2669	95415721 (5337, 5338)	Novel Protein sim. GBank gi 2147012 pir JC4899 - proline rich protein - rat			264489, 264889, 21906767, 65274572, 56182575, 21906768, 29148627, 21906769, 29148629, 35696286, 35695917, 22278998, 22278998, 265021, 265022, 60170615, 52644150, 60432048, 264259, 264691, 33657023, 264692, 29331822, 29331824, 29331825, 60432289, 33657109, 29331826, 29331827, 35696052, 29331828, 29146488, 29146499, 264905, 264908, 52644045, 264909, 56182435, 35696423, 65274781, 35695855, 265006, 264910, 264635, 60432228, 264592, 264638, 56182323, 60433356, 60170394, 60433438, 264559, 264595, 55812038, 33109954, 87168559, 60432113, 265019, 264448, 264369, 264684, 264288
2670	87613234 (5339, 5340)	Novel Protein sim. GBank gi 1723523 sp Q10362 YDDB SCHPO - HYPOTHETICAL 94.9 KD PROTEIN C22E12.11C IN CHROMOSOME I	Contains protein domain (PF00628) - PHD-finger		18108370, 263974
2671	91214836 (5341, 5342)	Novel Protein sim. GBank gi 4768277 gb AAD29444.1 AF06425 - (AF064255) very long-chain acyl-CoA synthetase homolog 2; VLCS-H2 [Homo sapiens]		transport	52646842, 56994075, 264259, 29331822, 29331824, 29331825, 29331827, 33656970, 264509, 265006, 33109954, 21906754, 264682, 264288, 265021, 33657023, 33657109, 33657182, 27486261, 27486262, 27486265, 18108376, 18108385
2672	87399123 (5343, 5344)	Novel Protein sim. GBank gi 4966346 gb AAD34677.1 AC00634 - (AC006341) Contains two PF01344 Kelch motif domains. [Arabidopsis italiana]	Contains protein domain (PF01344) - Kelch motif	UNCLASSIFIED	264767

2673	87430749 (5345, 5346)	Novel Protein sim. GBank gij5457337[emb CAB41505.2] - (AJ238876) poly(ADP-ribose) polymerase-2 [Homo sapiens]	Contains protein domain (PF00644) - Poly(ADP-ribose) polymerase catalytic region.	polymerase	22278995, 22278996, 22278997, 22278999, 29331822, 29331824, 29331828, 35696052, 60433438, 87188474, 87188559, 265017, 265018, 265019, 264448, 21908768, 21908769, 265020, 265021, 33657109, 27486262, 35695763, 60431850, 60170394, 87188518, 264563
2674	94847721 (5347, 5348)	Novel Protein sim. GBank gij4758824[ref NP_004280.1 pNRF3 - nuclear factor (erythroid-derived 2)-like 3	Contains protein domain (PF00170) - bZIP transcription factor	transcriptfactor	264488, 22278996, 35696286, 264091, 264259, 29331824, 29331826, 35696052, 264511, 55812038, 85658542, 264766, 21908765, 35695917, 264629, 35696423, 18108383, 87188518
2675	79563835 (5349, 5350)			UNCLASSIFIED	264691
2676	79828393 (5351, 5352)			UNCLASSIFIED	264906, 265008
2677	84328600 (5353, 5354)	Novel Protein sim. GBank gij1076042[pir S52154 - acetyl-CoA synthetase - fruit fly (Drosophila melanogaster)	Contains protein domain (PF00501) - AMP-binding enzyme	synthase	18108394, 65274572, 56182575, 22278994, 22278995, 56994075, 22278996, 35696286, 22278997, 22278999, 264490, 264259, 52645080, 29331824, 29331825, 60432289, 29331827, 29331828, 35696052, 29146499, 29331830, 284908, 52644045, 265006, 265007, 265008, 265009, 60432229, 60433356, 60433438, 55812038, 265010, 265011, 87188559, 265017, 265019, 18108351, 264682, 264448, 264683, 264288, 21908765, 21908766, 21908767, 21908768, 21908769, 55811957, 265020, 265021, 60170615, 52644150, 264691, 33657023, 263967, 33657109, 27486264, 27486265, 33657349, 35695763, 18108370, 18108374, 18108377, 55811576, 35696423, 35695855, 83373044, 18108387, 22279000, 22279002, 264584

2678	95001684 (5355, 5356)	Novel Protein sim. GBank gjl86760 pjlA40465 - alanine transaminase (EC 2.6.1.2), cytosolic - human		UNCLASSIFIED	264488, 263994, 264489, 18108394, 52646842, 35696286, 22278999, 264259, 29331825, 35696052, 264508, 264505, 264509, 264908, 264907, 264908, 264909, 264510, 264511, 265006, 264512, 265007, 265008, 264910, 265008, 264593, 264594, 264596, 264758, 33109954, 52646317, 21906754, 265010, 265011, 87168559, 264600, 264601, 264602, 264603, 265017, 265019, 264605, 264760, 264762, 18108351, 264763, 264682, 264683, 264764, 264288, 264766, 264687, 264768, 264769, 264689, 21906765, 21906767, 35695917, 265020, 265021, 52644150, 264691, 33657023, 33657349, 264628, 18108364, 18108365, 33657109, 35695855, 264630, 264631, 264632, 264634, 264635, 264555, 264636, 264637, 264638, 264639, 18108385, 264563, 264564, 264565, 264566, 264486, 264567
2679	95361544 (5357, 5358)	Novel Protein sim. GBank gjl709233 sp P07514 NCsR_BOVIN - NADH- CYTOCHROME B5 REDUCTASE	Contains protein domain (PF00970) - FAD/NAD-binding Cytochrome reductase	UNCLASSIFIED	264488, 22278996, 35696286, 264259, 29331826, 29331827, 29331828, 264908, 56182435, 264113, 264511, 265008, 60433438, 264758, 85658542, 87168474, 265011, 265017, 265019, 264288, 21906766, 21906767, 21906768, 21906769, 55811957, 265021, 264690, 33657023, 55810784, 35696423, 55811576, 264631, 18108381, 60170394, 83373044, 87168518, 264566
2680	97800356 (5359, 5360)	Novel Protein sim. GBank gjl458604 dbj BAA76824.1 - (AB023197) KIAA0980 protein [Homo sapiens]	Contains protein domain (PF00036) - EF hand	UNCLASSIFIED	264259, 264102, 264905, 264908, 265007, 265008, 33109954, 265011, 18108351, 264768, 33657023, 20281149, 263972, 264630, 264635, 264638
2681	90933844 (5361, 5362)	Novel Protein sim. GBank gjl728837 sp P39194 ALU7_HUMAN - IIII ALU SUBFAMILY SQ WARNING ENTRY IIII	kinase	UNCLASSIFIED	264489, 22278995, 264509, 264905, 264906, 264907, 264908, 264909, 264510, 265006, 264512, 264910, 264594, 60433438, 264758, 264603, 264604, 265019, 264605, 264760, 264764, 264687, 264768, 264769, 21906769, 35695917, 265020, 33657023, 264631, 264635, 264637, 264638, 264639, 264486
2682	94138934 (5363, 5364)	Novel Protein sim. GBank gjl423468 pjlJQ1974 - HTF-9-C protein - mouse	Contains protein domain (PF00076) - RNA recognition motif (a.k.a. RRM, RBD, or RNP domain)	UNCLASSIFIED	35696286, 264908, 55811386, 265017, 55811150, 55811957, 35695917, 60431528, 55810764, 55811576, 35696423, 65274791, 56526486
2683	87774405 (5365, 5366)	Novel Protein sim. GBank gjl5114351 gb AAD40286.1 - (AF158271) RING finger protein terf [Homo sapiens]	Contains protein domain (PF00622) - SPRY domain	interleukinrecept	264909, 264769, 264835, 264638

2684	85787151 (5367, 5368)	Novel Protein sim. GBank gij486469[emb]CAB43365.1] - (AL050284) hypothetical protein [Homo sapiens]			264593	
2685	88054289 (5369, 5370)	Novel Protein sim. GBank gij3342729 (AC005031) - R31341_2 [Homo sapiens]		UNCLASSIFIED		
2686	87628690 (5371, 5372)	Novel Protein sim. GBank gij4650844[dbj]BAA77027.1] - (AB028190) Kelch motif containing protein [Homo sapiens]	Contains protein domain (PF01344) - struct Kelch motif		264259, 29331822, 60432289, 29331827, 29331830, 264909, 264512, 264596, 264769, 264534, 264555, 264556, 264557, 264558, 60170394, 264559, 264488	
2687	87898183 (5373, 5374)	Novel Protein sim. GBank gij5281314[gb]AAD41475.1[AF13312] - (AF133123) transcription factor IIC102 [Homo sapiens]	Contains protein domain (PF00515) - transcript factor TPR Domain		18108394, 18108396, 22278996, 35696286, 22278997, 29331826, 29331828, 66712502, 21906754, 265011, 264760, 264761, 264763, 264689, 21906765, 35696423, 264559, 18108385, 264563	
2688	79959584 (5375, 5376)				264908, 264760	
2689	94122440 (5377, 5378)	Novel Protein sim. GBank gij3880023[emb]CAA97339] - (Z73098) Similarity to yeast hypothetical protein (Swiss Prot accession number Q09695); cDNA EST EMBL:D72982 comes from this gene; cDNA EST EMBL:D75947 comes from this gene [Caenorhabditis elegans]	Contains protein domain (PF00560) - Leucine Rich Repeat		22278997, 22278998, 22278999, 29331824, 35696052, 264908, 264908, 56182435, 264512, 264910, 265009, 60433438, 21906754, 18108351, 264682, 264683, 264767, 21906765, 21906766, 21906768, 33657023, 33657182, 27486262, 27486264, 33657349, 18108370, 18108372, 18108374, 35696423, 35695855, 18108385, 22279002	
2690	88003055 (5378, 5380)	Novel Protein sim. GBank gij2477513 (AC002398) - F25965_3 [Homo sapiens]	Contains protein domain (PF00620) - struct RhoGAP domain			
2691	91219241 (5381, 5382)	Novel Protein sim. GBank gij4107276[emb]CAA67130] - (X98506) acetyl-CoA synthetase [Solanum tuberosum]	synthase		65274572, 56182575, 264259, 29331822, 29331824, 29331826, 29331828, 264112, 265009, 55812038, 264596, 33109954, 265017, 264448, 264288, 264369, 264684, 21906769, 60170815, 60431528, 55810764, 264634, 264636, 264556, 264637, 22279002, 264564, 264566	
2692	94111814 (5383, 5384)	Novel Protein sim. GBank gij3513303 (AC005594) - R28884_1 [Homo sapiens]	Contains protein domain (PF00326) - peptidase Prolyl oligopeptidase family			
2693	20438807 (5385, 5386)			UNCLASSIFIED	264592	
2694	94111818 (5387, 5388)	Novel Protein sim. GBank gij3122400[sp]O35682[MUG_MOUSE - MYELOID UPREGULATED PROTEIN]			264559	
2695	95345513 (5389, 5390)	Novel Protein sim. GBank gij4972740[gb]AAD34765.1] - (AF132177) unknown [Drosophila melanogaster]	collagen		35696286, 56994075, 22278999, 264259, 35696052, 29331830, 265011, 264288, 56181562, 264690, 264692, 33657023, 27486262, 263976, 18108376, 35696423, 35695855, 60170394, 83373044, 56526486, 22279000, 22279002, 264566	
2696	87874040 (5391, 5392)	Novel Protein sim. GBank gij728831[sp]P39188[ALU1_HUMAN - IIII ALU SUBFAMILY J WARNING ENTRY IIII]	synthase		264594, 21906768, 18108370, 18108372	

2697	91638472 (5393, 5394)	Novel Protein sim. GBank glij5689473dbjBAA83020.1] - (AB028991) KIAA1088 protein [Homo sapiens]		UNCLASSIFIED	35696286, 264259, 29331824, 29331825, 29331826, 29331827, 29331828, 35696052, 265006, 265007, 264512, 265009, 60170831, 60433356, 264595, 264758, 87188474, 265010, 265011, 87188559, 264601, 265017, 265018, 265019, 264761, 18108351, 264448, 264288, 264766, 264688, 264689, 21906765, 21906768, 265020, 265021, 60170615, 33657109, 18108376, 35696423, 35695855, 264555, 264556, 60170394, 264559, 18108387, 56526486, 87188518, 22279002, 264563, 264482
2698	94325891 (5395, 5396)	Novel Protein sim. GBank glij841318 (U22818) - mutant sterol regulatory element binding protein-2 [Cricketulus griseus]	Contains protein domain (PF00412) - LIM domain containing proteins	transcript factor	22278995, 35696286, 22278996, 22278997, 22278998, 22278999, 264259, 29331822, 29331824, 29331825, 60432289, 29331826, 29331827, 33656870, 264906, 29331830, 264909, 52644045, 264910, 60433356, 33657402, 33108954, 265017, 265018, 265019, 264288, 21906765, 21906766, 21906767, 21906769, 29148629, 35695917, 265021, 265022, 52644150, 33657023, 33657182, 27486261, 35696423, 65274791, 264638, 60432113, 22279000
2699	87780650 (5397, 5398)	Novel Protein sim. GBank		UNCLASSIFIED	264768, 18108357, 264690, 264691
2700	94139838 (5399, 5400)	glij5174395[ref]NP_006006.1pB120 - Brain protein 120		UNCLASSIFIED	60424269, 56182435, 60432229, 60433438, 55811366, 265017, 55811150, 264448, 56181562, 55811957, 264693, 33657109, 60431528, 264629, 55810764, 55811576, 65274791, 60431850, 60432113
2701	94148584 (5401, 5402)	Novel Protein sim. GBank glij1572801 (U70854) - F38A5.1 gene product [Caenorhabditis elegans]			18108394, 52645156, 35696288, 264259, 29331822, 29331824, 29331825, 60432289, 29331826, 29331827, 35696052, 29331828, 29146499, 265008, 60433356, 33657402, 60433438, 264595, 33657084, 18108351, 264288, 264769, 18108359, 21906768, 35695917, 33657023, 27486261, 18108374, 18108379, 35696423, 18108382, 83373044, 18108384, 18108388, 60432113, 22279000
2702	57285366 (5403, 5404)	Novel Protein sim. GBank glij2605967 (AF030027) - 24 [Equine herpesvirus 4]		UNCLASSIFIED	29331828, 264512, 264555, 264556, 264557, 264558, 264559
2703	87649514 (5405, 5406)	Novel Protein sim. GBank glij5689399dbjBAA82983.1] - (AB028954) KIAA1031 protein [Homo sapiens]	Contains protein domain (PF00642) - Zinc finger C-x8-C-x5-C-x3-H type (and similar)		60432289, 265007, 21906765, 21906768, 265021, 264563

2704	87649515 (5407, 5408)	Novel Protein sim. GBank gi 4335694 gb AAB63294 - (AF008554) Implantation-associated protein [Rattus norvegicus]			264488, 22278995, 22278998, 29331828, 29146499, 264505, 264906, 264907, 52644045, 264511, 33657402, 264600, 264602, 265017, 264605, 264761, 18108351, 264764, 264687, 264769, 265021, 264691, 264692, 18108362, 264693, 18108370, 18108374, 264634, 264635
2705	87771745 (5409, 5410)				264489, 264509, 264511, 264512, 264910, 264593, 87168474, 264604, 264288, 264687, 264769, 264638, 264566, 264486
2706	94326789 (5411, 5412)	Novel Protein sim. GBank gi 3255952 emb CAA16821.1 - (AL021728) /prediction=(method: /match=(desc: [Drosophila melanogaster])	UNCLASSIFIED		264488, 52646842, 65274572, 22278994, 56994075, 22278997, 264259, 29331824, 29331825, 29331826, 29331828, 33656970, 264907, 264908, 264909, 52644045, 56182435, 265006, 265007, 60433438, 55812038, 21908754, 52644296, 265010, 264601, 265017, 265019, 264681, 264448, 264682, 264288, 264686, 264687, 264688, 21908766, 21906769, 55811957, 35695917, 265020, 265021, 60170615, 264690, 264691, 33657023, 264692, 264693, 65274620, 27486284, 263972, 18108374, 18108377, 264635, 264636, 264556, 60170394, 83373044, 65274727, 87168518, 22279000
2707	88089839 (5413, 5414)	Novel Protein sim. GBank gi 3417294 (AC004381) - Unknown gene product [Homo sapiens]			22278996, 22278998, 56182435, 21906754, 87168559, 265017, 264448, 52645129
2708	91011351 (5415, 5416)	Novel Protein sim. GBank gi 545790 bbs 147178 - DARPP-32-dopamine and cAMP-regulated phosphoprotein [human, brain, Peptide, 204 aa]	UNCLASSIFIED		65274572, 264259, 29331822, 29331825, 60432289, 29331826, 29331827, 29331828, 264909, 264510, 265007, 264910, 60433356, 60433438, 33109954, 265010, 265011, 264389, 264288, 264765, 264693, 264565
2709	94653888 (5417, 5418)	Novel Protein sim. GBank gi 3169705 (AC004780) - F17127_1 [Homo sapiens]	UNCLASSIFIED		29331822, 18108370, 18108374, 83373044
2710	87627879 (5419, 5420)	Novel Protein sim. GBank gi 4468311 emb CAB37992 - (AL031432) dJ46SN24.2.1 (PUTATIVE novel protein) (isoform 1) [Homo sapiens]			29331824, 264759, 264693, 18108382, 18108388

2711	94111820 (5421, 5422)	Novel Protein sim. GBank gi 3122400 sp O35682 MUG_MOUSE - MYELOID UPREGULATED PROTEIN		UNCLASSIFIED	264488, 264687, 52645156, 264769, 21906764, 21906765, 21906767, 21906768, 21906769, 55811957, 56994075, 22278997, 22278998, 265020, 265021, 264690, 264259, 264691, 264692, 33657023, 29331822, 29331824, 60424269, 29331826, 33657182, 29331827, 27486262, 33657349, 264508, 264905, 264907, 60431528, 264908, 264909, 55810764, 35698423, 65274791, 35695855, 265007, 264910, 60431850, 60432229, 264557, 264558, 55812038, 33109954, 18108385, 21906754, 33657084, 87168518, 87168474, 87168559, 60432113, 265017, 22279000, 265018, 265019, 22279002, 264760, 55811150, 264681, 18108351, 264555, 264764, 264586, 264288, 264768
2712	94312071 (5423, 5424)	Novel Protein sim. GBank gi 5081315 gb AAD39343.1 AF07660 - (AF076607) prediabetic NOD sera-reactive autoantigen [Mus musculus]	Contains protein domain (PF00515) - TPR Domain	transferase	264488, 35696286, 22278998, 264259, 29331824, 60432228, 35696052, 264508, 264908, 66712502, 52644045, 265006, 60432229, 33657402, 60433356, 265010, 265019, 18108351, 264681, 264288, 264685, 21906765, 21906768, 21906768, 21906769, 55811957, 35695917, 265020, 265021, 60170615, 264691, 264692, 33657023, 33657109, 33657182, 33657349, 18108370, 18108374, 35696423, 35695855, 264555, 52644332, 56182323, 87168518, 60432113 66714117, 264906, 264563
2713	88003064 (5425, 5426)	Novel Protein sim. GBank gi 2477513 (AC002398) - F25965_3 [Homo sapiens]		UNCLASSIFIED	264636
2714	13528218 (5427, 5428)	Novel Protein sim. GBank gi 4321968 gb AAD15897 - (AF067430) Smarce1-related protein [Mus musculus]		UNCLASSIFIED	264508, 264905, 264907, 264908, 264909, 264910, 264758, 265011, 264760, 264764, 264288, 264766, 264768, 264636
2715	94122454 (5429, 5430)	Novel Protein sim. GBank gi 3327046 db BAA31591 - (AB014516) KIAA0816 protein [Homo sapiens]		glycoprotein	264091, 264259, 29331822, 66714117, 264908, 264369, 264693, 264556, 264563 264593, 264558
2716	88003068 (5431, 5432)	Novel Protein sim. GBank gi 2477513 (AC002398) - F25965_3 [Homo sapiens]			264693
2717	80077461 (5433, 5434)	Novel Protein sim. GBank gi 3327046 db BAA31591 - (AB014516) KIAA0816 protein [Homo sapiens]			264693
2718	79604062 (5435, 5436)	Novel Protein sim. GBank gi 746495 (U23515) - weakly similar to gastrula zinc finger protein [Caenorhabditis elegans]		UNCLASSIFIED	29331822, 87168559, 265019, 265021, 52644150, 264691

2720	95086242 (5439, 5440)	Novel Protein sim. GBank gi 1335873 (U46690) - ATP-dependent RNA helicase [Mus musculus]	Contains protein domain (PF00270) - helicase DEAD/DEAH box helicase	18108374, 60424179, 264489, 56182435, 21908765, 21908766, 35696423, 22278997, 265020, 285022, 265008, 265008, 264092, 264636, 60432229, 264691, 264692, 33657023, 264693, 33657402, 83373044, 29331824, 18108368, 60424269, 29331826, 18108385, 52645129, 21906754, 35696052, 29331828, 87168474, 284100, 265010, 265011, 265019, 22279002, 264905, 264482, 264563, 264906, 18108351, 264681, 18108370, 29331830, 264908, 66712502, 52644045, 264909, 264828, 18108354
2721	95345523 (5441, 5442)	Novel Protein sim. GBank gi 4929663 gb AAD34092.1 AF15185 - (AF15185) CGI-97 protein [Homo sapiens]	Contains protein domain (PF01172) - Uncharacterized protein family UPF0023	22278995, 35696286, 264259, 29331822, 29331824, 66714117, 29331826, 264906, 60433438, 265017, 18108351, 264448, 264288, 264769, 21906766, 265021, 33657109, 263969, 60431528, 264629, 55811576, 65274791, 35695855, 264631, 264637, 60170394, 56182323, 22279000
2722	91638807 (5443, 5444)	Novel Protein sim. GBank gi 3212997 gb AAC23434.1 - (AC004997) match to ESTs AA667999 (NID:g2626700), AA165465 (NID:g1741481), Z45871 (NID:g575105), and T84026 (NID:g712314); similar to various tre-like proteins including: AF040654 (PID:g2746883), D13644 (PID:g2104571), AL02114...	Contains protein domain (PF00566) - oncogene TBC domain	35696286, 22278999, 21906754, 265017, 264762, 264288, 21906765, 21906767, 21906768, 35695917, 18108362, 27466262, 35695855, 264558, 264559
2723	87387732 (5445, 5446)		UNCLASSIFIED	264508, 264509, 264906, 264909, 264910, 55812038, 264766, 264687, 264629, 264636, 264486
2724	87639563 (5447, 5448)	Novel Protein sim. GBank gi 4680681 gb AAD27730.1 AF13295 - (AF13295) CGI-21 protein [Homo sapiens]	ubiquitin	18108396, 22278999, 20281099, 29331824, 29331826, 60432289, 29331828, 80170831, 60432229, 60433438, 18108351, 264682, 21906766, 21906767, 21906769, 35695917, 33657023, 33657109, 18108372, 18108374, 35695855, 22279000, 22279002
2725	94853991 (5449, 5450)	Novel Protein sim. GBank gi 3169705 (AC004780) - F17127_1 [Homo sapiens]	UNCLASSIFIED	264488, 52644507, 264259, 29331827, 21908754, 285011, 18108351, 264448, 264288, 264685, 264689, 35695917, 265020, 33657182, 27466261, 18108370, 18108374, 35696423, 18108385, 22279000
2726	86880599 (5451, 5452)	Novel Protein sim. GBank gi 3342738 (AC005328) - R28660_1, partial CDS [Homo sapiens]	MHC	264488, 264828, 264685

2727	91010470 (5453, 5454)	Novel Protein sim. GBank gi 731267 sp P39219 RLUA_ECOLI - RIBOSOMAL LARGE SUBUNIT PSEUDOURIDINE SYNTHASE A (PSEUDOURIDYLATE SYNTHASE) (URACIL HYDROLYASE)	Contains protein domain (PF00848) - synthase RNA pseudouridylylate synthase	65274572, 56182575, 22278994, 56994075, 22278996, 22278997, 22278999, 60432049, 29331822, 29331824, 66714117, 29331826, 29331827, 35696052, 29331828, 33656970, 264509, 66712502, 264910, 33657402, 60433438, 264758, 55812038, 21906754, 33657084, 55811386, 265018, 265019, 264767, 21906765, 21906767, 21906769, 55811957, 35695917, 52644150, 33657023, 33657109, 33657182, 27486261, 27486262, 27486265, 33657349, 55811576, 35696423, 35695855, 264630, 60431850, 264636, 56182323, 87168518, 60432113, 22279000, 264564, 264565
2728	94126022 (5455, 5456)	Novel Protein sim. GBank gi 3880433 emb CAA91399 - (Z66521) similar to mitochondrial RNA splicing MSR4 like protein; cDNA EST EMBL:CO9217 comes from this gene [Caenorhabditis elegans]	Contains protein domain (PF00153) - Mitochondrial carrier proteins	UNCLASSIFIED 18108394, 56182435, 21906767, 55811957, 35695855, 265021, 264690, 264556, 264259, 264557, 29331822, 264559, 264448, 264288
2729	94126024 (5457, 5458)	Novel Protein sim. GBank gi 2408095 emb CAB18300 - (Z89168) putative RNA splicing protein [Schizosaccharomyces pombe]	Contains protein domain (PF00153) - Mitochondrial carrier proteins	UNCLASSIFIED 65274572, 264259, 60432289, 66712502, 56182435, 264448, 264288, 264369, 55811957, 265021, 264557, 60432113
2730	94126026 (5459, 5460)	Novel Protein sim. GBank gi 3880433 emb CAA91399 - (Z66521) similar to mitochondrial RNA splicing MSR4 like protein; cDNA EST EMBL:CO9217 comes from this gene [Caenorhabditis elegans]	Contains protein domain (PF00153) - Mitochondrial carrier proteins	UNCLASSIFIED 264887, 29331824, 29331826, 35696052, 264107, 56182435, 265008, 265009, 264592, 60431735, 265011, 264601, 265017, 18108351, 264288, 29148627, 55811957, 265021, 264690, 18108368, 18108374, 264557, 264558, 264559, 18108387, 56526486, 264566, 264486
2731	87723022 (5461, 5462)	Novel Protein sim. GBank gi 17232329 sp Q10166 YAUB_SCHPO - HYPOTHETICAL 35.7 KD PROTEIN C26A3.11 IN CHROMOSOME 1	Contains protein domain (PF00795) - Carbon-nitrogen hydrolase	264259, 35696052, 265008, 264758, 264762, 264448, 264288, 29148627, 21908769, 87168518, 22279002
2732	94126028 (5463, 5464)	Novel Protein sim. GBank gi 3880433 emb CAA91399 - (Z66521) similar to mitochondrial RNA splicing MSR4 like protein; cDNA EST EMBL:CO9217 comes from this gene [Caenorhabditis elegans]	Contains protein domain (PF00153) - Mitochondrial carrier proteins	UNCLASSIFIED 264887, 264489, 18108358, 56182435, 264889, 35696423, 55811957, 265021, 265006, 265008, 264910, 265009, 264690, 264555, 264259, 264556, 264557, 264558, 264559, 18108383, 33657109, 87168518, 265010, 264601, 60432113, 265017, 264905, 264448, 263972, 264369, 264567
2733	87363060 (5465, 5466)	Novel Protein sim. GBank gi 4519621 db BAA75870.1 - (AB017614) OASIS protein [Mus musculus]	Contains protein domain (PF00170) - bZIP transcription factor	UNCLASSIFIED 29331825, 264509, 264809, 60424179, 52644507, 56182575, 264259, 29331828, 264907, 264510, 264910, 60433356, 265019, 55811150, 264681, 264763, 264687, 33657182, 18108370, 60431528, 60431850, 56182323, 83373044

2735	87712338 (5489, 5470)	Novel Protein sim. GBank gij3850569 (AC005278) - ESTs gb T21276, gb T45403, and gb AA586113 come from this gene. [Arabidopsis thaliana]		glycoprotein	22278996, 60432289, 29331827, 29148488, 264108, 264909, 264112, 33657402, 87168474, 265017, 264762, 264448, 264764, 264684, 21906765, 264693, 33857109, 263976, 264636, 264638, 264557, 22279000, 22279002, 264567
2736	80247655 (5471, 5472)			UNCLASSIFIED	264905, 264628, 264629, 263978, 264632, 264564
2737	87604528 (5473, 5474)				264690
2738	85731808 (5475, 5476)	Novel Protein sim. GBank gij2558501[dbj BAA22896] - (D63850) hepatoma-derived growth factor [Mus musculus]			264488, 265009, 264768, 264691
2739	94318034 (5477, 5478)	Novel Protein sim. GBank gij5420387[emb CAB46679.1] - (AJ243459) proteophosphoglycan [Leishmania major]		UNCLASSIFIED	264684, 83373044, 264566
2740	94148762 (5479, 5480)	Novel Protein sim. GBank gij3417386[emb CAA75495] - (Y15197) microtubule-associated protein, MAP-115 [Mus musculus]		UNCLASSIFIED	264488, 56182575, 22278995, 35656286, 22278997, 22278998, 22278999, 264259, 29331822, 29331824, 29331825, 29331827, 35696052, 29331828, 29146498, 29331830, 265006, 265007, 265009, 60432229, 33657402, 55812038, 87168474, 265010, 265011, 265017, 265018, 265019, 264605, 264681, 264288, 264369, 52644229, 21906765, 21906766, 21906767, 21906768, 21906769, 265020, 265022, 264691, 264692, 33657109, 18108370, 18108374, 55810764, 35695855, 264634, 60431850, 264639, 56182323, 18108382, 18108385, 85274727, 22279002, 264564
2741	88047518 (5481, 5482)	Novel Protein sim. GBank gij3242764 (AC005154) - similar to protein U28928 (PID:g861308) [Homo sapiens]		UNCLASSIFIED	22278996, 52644045, 52644229, 21906768, 21908769, 265020, 60170615, 264691
2742	87648644 (5483, 5484)	Novel Protein sim. GBank gij4758412[ref NP_004472.1]pGALN - UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylglucosaminyltransferase 2 (GalNAc-T2)	Contains protein domain (PF00652) - transferase Similarity to lectin domain of ricin beta-chain, 3 copies.		264259, 264905, 264758, 55812038, 264369, 29148627
2743	87627991 (5485, 5486)	Novel Protein sim. GBank gij4466311[emb CAB37892] - (AL031432) dJ465N24.2.1 (PUTATIVE novel protein) (isoform 1) [Homo sapiens]		UNCLASSIFIED	35696286, 264259, 264906, 264908, 265006, 60433438, 265017, 18108351, 264448, 264764, 264288, 21906765, 21906767, 264690, 264691, 264693, 263969, 263971, 35695855, 264637, 264558, 18108382, 60432113
2744	94126030 (5487, 5488)	Novel Protein sim. GBank gij3880433[emb CAA91399] - (Z66521) similar to mitochondrial RNA splicing MSR4 like protein; cDNA EST EMBL:CO9217 comes from this gene [Caenorhabditis elegans]	Contains protein domain (PF00153) - kinase Mitochondrial carrier proteins	- kinase	18108374, 264488, 56182435, 21906765, 35696423, 35695917, 35695855, 265020, 285021, 264511, 265009, 264490, 264556, 264259, 264557, 56182323, 264558, 264559, 18108383, 29331824, 18108385, 33657109, 29331826, 21908754, 29331827, 29331828, 33657349, 87168518, 265018, 264905, 264482, 264448, 264486, 264369, 264288

2745	87740125 (5489, 5490)	Novel Protein sim. GBank gi 4405795 gb AAD19826 - (AF038963) RNA helicase [Homo sapiens]	Contains protein domain (PF00271) - Helicases conserved C-terminal domain	helicase	35696286, 264509, 264905, 264907, 264908, 264909, 264510, 264512, 265008, 264758, 264801, 265017, 264604, 264763, 264288, 264686, 264769, 264693, 35696423, 35695855, 264634, 264636, 264563, 264564, 264565
2746	95418601 (5491, 5492)	Novel Protein sim. GBank gi 4758738 ref NP_004680.1 pMTA1 - metastasis associated 1	Contains protein domain (PF00320) - GATA zinc finger	UNCLASSIFIED	22278996, 22278998, 22278999, 29331822, 29331826, 29331827, 35696052, 29331828, 264905, 264906, 264907, 264908, 264909, 52644045, 285006, 60170831, 264598, 55812038, 265018, 264683, 264288, 21906765, 21906767, 21906768, 21906769, 265020, 264690, 33657023, 264693, 33657109, 18108368, 18108374, 264558, 18108385, 22279000, 264563
2747	94112677 (5493, 5494)	Novel Protein sim. GBank gi 4557803 ref NP_000262.1 pNPC1 - Niemann-Pick disease, type C1		glycoprotein	264569, 52644507, 18108394, 22278995, 35696286, 22278997, 22278999, 52645080, 29331824, 56182181, 29331826, 29331827, 35696052, 264907, 264908, 264909, 265009, 33109954, 55811386, 87168474, 265010, 87168559, 264603, 265019, 264760, 264686, 264768, 21908769, 35695917, 60170815, 264692, 33657023, 52645129, 27486264, 60431528, 18108374, 35696423, 35695855, 264556, 56182323, 18108385, 264482
2748	91214983 (5495, 5496)	Novel Protein sim. GBank gi 4191272 emb CAA09884 - (AJ012295) apaG protein [Rhizobium etli]	Contains protein domain (PF00646) - F-box domain.		65274572, 29331828, 264112, 264511, 265019, 264760, 264767, 264768, 264769, 21908768, 21908769, 265020, 27486262, 56526486, 87168518, 22279000
2749	87346307 (5497, 5498)				264259, 264908, 264510, 265008, 265009, 264760, 264369, 264768, 264563
2750	87336344 (5499, 5500)	Novel Protein sim. GBank gi 1872498 (U74297) - PiUS [Cryptolagus cuniculus]		UNCLASSIFIED	264488, 52644507, 18108396, 56994075, 264259, 29331825, 29331826, 29331827, 29331828, 264508, 265009, 264910, 264591, 264595, 33657084, 265011, 265019, 18108351, 264288, 264686, 264769, 264689, 55811957, 264693, 27486264, 18108370, 18108374, 264558, 18108385, 264482, 264563
2751	87057465 (5501, 5502)			UNCLASSIFIED	29331822, 29331824, 265017, 33657023
2752	88062675 (5503, 5504)	Novel Protein sim. GBank gi 3041859 (AC004534) - OG-2 homeodomain protein-like; similar to U65087 (PID:gi1575526) [Homo sapiens]	Contains protein domain (PF00046) - Homeobox domain	homeobox	

2753	94138972 (5505, 5506)	Novel Protein sim. GBank gi 3851648 (AF098301) - neural F-box protein NFB42 [Rattus norvegicus]	Contains protein domain (PF00646) - F-box domain.	UNCLASSIFIED	56182575, 56994075, 22278998, 29331822, 29331824, 29331825, 29331828, 265007, 264593, 55812038, 33109954, 18108351, 264288, 56181562, 21906767, 21906768, 265021, 264893, 18108374, 65274791, 264632, 56182323, 22279002, 264563, 264567
2754	94115513 (5507, 5508)	Novel Protein sim. GBank gi 535428 (U13736) - calmodulin-like protein [Pisum sativum]	Contains protein domain (PF00036) - EF hand	struct	22278999, 66714117, 29331827, 35695052, 29331828, 264906, 264908, 264909, 265011, 265017, 265018, 265019, 264288, 21906765, 21906767, 265022, 33657023, 264693, 56182323, 18108382, 22279000
2755	88001472 (5508, 5510)	Novel Protein sim. GBank gi 2998653 (AC004510) - R30385_2 [Homo sapiens]	Contains protein domain (PF00096) - Zinc finger, C2H2 type	transcriptfactor	
2756	11465908 (5511, 5512)	Novel Protein sim. GBank gi 1173539 (U30473) - putative src-like adapter protein; non-catalytic src-like adapter protein containing SH3 and SH2 domains; homolog of mouse SLAP; Method: conceptual translation supplied by author [Homo sapiens]	Contains protein domain (PF00017) - Src homology domain 2	UNCLASSIFIED	264594
2757	95381590 (5513, 5514)	Novel Protein sim. GBank gi 3608372 (AF053768) - brain specific cortactin-binding protein CBF90 [Rattus norvegicus]		eph	85658542, 264693
2758	79637846 (5515, 5516)	Novel Protein sim. GBank gi 2072200 (U94863) - p40 [Borna disease virus]		struct	264693
2759	91005312 (5517, 5518)	Novel Protein sim. GBank gi 4914573 (lemb CAB43685.1) - (AL050390) hypothetical protein [Homo sapiens]	Contains protein domain (PF00023) - Ank repeat	UNCLASSIFIED	65274572, 35696286, 66714117, 29331828, 264508, 56182435, 21906754, 55811957, 264629, 264636, 56182323, 22279002
2760	79824798 (5519, 5520)	Novel Protein sim. GBank gi 3136150 (AF050182) - PERIOD 3 [Mus musculus]	Contains protein domain (PF00989) - PAS domain	nuclease	264908
2761	87639597 (5521, 5522)	Novel Protein sim. GBank gi 3136150 (AF050182) - PERIOD 3 [Mus musculus]			22278998, 29331822, 29331830, 265010, 265019, 264288, 21906765, 21906768, 21906769, 265020, 56182323, 22279002, 264563
2762	87592689 (5523, 5524)	Novel Protein sim. GBank gi 3136150 (AF050182) - PERIOD 3 [Mus musculus]	Contains protein domain (PF00989) - PAS domain	struct	18108384, 22278998, 264906, 264909, 265006, 265007, 264757, 265010, 265011, 265017, 265019, 18108351, 264448, 264683, 264686, 264768, 265020, 265021, 265022, 264691, 18108362, 264693, 18108385, 33657109, 18108368, 18108370, 18108381, 18108382, 18108384, 18108388, 87168518
2763	87539968 (5525, 5526)	Novel Protein sim. GBank gi 3511122 (AF060503) - zinc finger protein [Homo sapiens]	Contains protein domain (PF01352) - KRAB box	transcriptfactor	294369, 35696423
2764	94305140 (5527, 5528)	Novel Protein sim. GBank gi 2905643 (AF045244) - ribitol kinase [Klebsiella pneumoniae]	Contains protein domain (PF000370) - FGYY family of carbohydrate kinases		52648842, 264259, 29331822, 29331825, 29331826, 29331828, 33656970, 264905, 264907, 29331830, 265006, 265009, 21906754, 265019, 264448, 21906769, 27485262, 56182323, 56526488, 87168518, 264487

2765	94315105 (5529, 5530)	Novel Protein sim. GBank gl 4688672 emb CAA17688.2 - (AL022018) /prediction=(method:; /prediction=(method:; /match=(desc: [Drosophila melanogaster])			264488, 65274572, 22278995, 35696286, 22278998, 22278999, 264259, 29331822, 29331824, 35696052, 264508, 264509, 264905, 264908, 264907, 264908, 264909, 264512, 264910, 265009, 264592, 264595, 264758, 55812038, 33109954, 265010, 87168559, 264600, 265018, 264760, 264761, 264762, 264763, 264448, 264764, 264288, 264766, 264767, 264768, 56181562, 21908764, 21908765, 21908768, 35695917, 265021, 264691, 264692, 33657023, 33657109, 264628, 18108370, 264629, 18108374, 55811576, 35696423, 35695855, 264631, 264634, 264635, 264636, 264637, 264638, 264558, 264639, 83373044, 87168518, 22279000, 22279002, 264563, 264482
2766	94315109 (5531, 5532)	Novel Protein sim. GBank gl 5441611 emb CAB46854.1 - (AJ388555) hypothetical protein [Canis familiaris]	Contains protein domain (PF00076) - RNA recognition motif. (a.k.a. RRM, RBD, or RNP domain)	dna_ma_bind	264488, 65274572, 60432289, 264907, 264909, 264511, 264512, 80433356, 264288, 264685, 264689, 35695917, 265022, 264693, 264628, 65274791, 264635, 264555, 264558, 264557, 264638, 264558, 264559, 83373044, 60432113
2767	80204297 (5533, 5534)	Novel Protein sim. GBank gl 1079451 pir A55463 - Iropomodulin, skeletal muscle - chicken		struct	264112, 263974, 264558
2768	94322238 (5535, 5536)	Novel Protein sim. GBank gl 5441322 emb CAB46721.1 - (AL031427) dJ167A19.1 (novel protein) [Homo sapiens]		UNCLASSIFIED	264488, 263994, 264489, 35696286, 22278998, 22278999, 264259, 29331822, 60432289, 29331826, 35696052, 264508, 264509, 264905, 264906, 264907, 29331830, 264908, 264909, 264510, 264511, 264512, 265008, 264910, 265009, 264591, 264592, 264593, 33657402, 264594, 264595, 264757, 264596, 265011, 264604, 265019, 264760, 264681, 18108351, 264764, 264288, 264766, 264686, 264768, 18108357, 264769, 264689, 21908766, 21908768, 21908769, 35695917, 265021, 265022, 33657023, 33657109, 264628, 264629, 18108374, 35696423, 35695855, 264630, 264631, 264632, 264634, 264635, 264636, 264555, 264638, 264639, 83373044, 264563, 264564, 264565, 264566, 264486, 264567

2769	95311088 (5537, 5538)	Novel Protein sim. GBank gi 5419859 emb CAB46375.1 - (AL096726) hypothetical protein [Homo sapiens]		tubulin	264488, 56182575, 264259, 29331822, 29331824, 66714117, 29331825, 60432289, 29331828, 264908, 29331830, 56182435, 264592, 33657402, 264448, 264368, 264288, 60170615, 264691, 33657023, 264692, 33657109, 18108374, 55811576, 264634, 264636, 56182323, 83373044, 60432113
2770	87730182 (5539, 5540)	Novel Protein sim. GBank gi 5701865 emb CAB52157.1 - (AL109736) WD repeat protein [Schizosaccharomyces pombe]	Contains protein domain (PF00400) - WD domain, G-beta repeat	kinase	18108398, 22278995, 22278996, 22278999, 284105, 265006, 265019, 18108351, 264687, 21906765, 18108364, 264629, 18108374, 264631, 18108385, 18108388
2771	88084071 (5541, 5542)	Novel Protein sim. GBank gi 3083433 (AC004125) - Unknown gene product [Homo sapiens]		UNCLASSIFIED	264259, 29331822, 29331824, 29331825, 264369
2772	95357308 (5543, 5544)	Novel Protein sim. GBank gi 4885531 ref NP_005465.1 pNY C - histone deacetylase 5	Contains protein domain (PF00850) - Histone deacetylase family	histone	264259, 29331822, 29331824, 66714117, 60432289, 29331827, 264905, 265009, 264592, 55812038, 65274444, 264766, 21906769, 33657109, 263978, 264555, 264638, 264557, 83373044, 264563, 264564, 264486
2773	94138984 (5545, 5546)	Novel Protein sim. GBank gi 3288888 (AC005253) - R26445_1 [Homo sapiens]		UNCLASSIFIED	18108374, 264686, 264687, 263976, 56182435, 264689, 55810764, 21908766, 35696423, 55811576, 65274791, 56181666, 55811957, 35695855, 284110, 265021, 264112, 265022, 265006, 265008, 264092, 264094, 60431850, 264637, 264691, 264259, 264692, 263981, 264594, 60433356, 56182323, 264683, 264757, 56182181, 55812038, 29331825, 60424269, 18108385, 29331828, 29331827, 27486261, 29331828, 35696052, 55811386, 284107, 60432113, 265017, 55811150, 18108351, 264681, 264906, 18108370, 264484, 264682, 20281069, 264448, 66712502, 264683, 264764, 264288, 264684, 264766, 263974
2774	87819908 (5547, 5548)	Novel Protein sim. GBank gi 465852 sp P34388 YLS3_CAEEL - HYPOTHETICAL 70.7 KD PROTEIN F09G8.3 IN CHROMOSOME III	Contains protein domain (PF00380) - Ribosomal protein S9/S16	ribosomalprot	22278995, 35696286, 22278996, 22278999, 264259, 29331826, 60432289, 35696052, 284112, 33657402, 21908754, 87168559, 265017, 265018, 264288, 21906766, 21906767, 21906769, 35695917, 265020, 265021, 33657023, 33657109, 18108370, 263978, 35696423, 35695855, 87168518, 22279000, 264482

2775	95307987 (5549, 5550)	Novel Protein sim. GBank gi 4689132 gb AAD27775.1 AF07704 - (AF077042) 30S ribosomal protein S7 homolog [Homo sapiens]	Contains protein domain (PF00177) - Ribosomal protein S7p/S5a	- ribosomal prot	264488, 22278995, 56994075, 22278998, 3569288, 22278998, 22278999, 264259, 29331822, 29331824, 29331825, 60432289, 29331827, 29331828, 35686052, 265007, 21908754, 285017, 265019, 264448, 264682, 264369, 264288, 18108354, 52644229, 264689, 21906765, 21906766, 21906767, 21906768, 21906769, 35695917, 265021, 265022, 60170615, 264691, 18108370, 35696423, 65274781, 35685855, 264634, 60431850, 60170394, 56182323, 264558, 18108388, 22279000, 264563, 264565, 264486, 264567
2776	87791557 (5551, 5552)				56182575, 22278998, 22278999, 264259, 29331822, 29331824, 264908, 29331830, 264510, 33657402, 21906754, 5581386, 265017, 265019, 264448, 264288, 21906765, 21906768, 21906767, 21906768, 21906769, 265020, 265021, 265022, 60170615, 55810764, 55811576, 264555, 56526486, 22279000
2777	79818729 (5553, 5554)			UNCLASSIFIED	264907, 264766
2778	82112411 (5555, 5556)			UNCLASSIFIED	264907, 264593, 264760, 264628
2779	87649729 (5557, 5558)	Novel Protein sim. GBank gi 4680711 gb AAD27745.1 AF13297 - (AF132970) CGI-36 protein [Homo sapiens]		UNCLASSIFIED	22278997, 264259, 29331824, 66714117, 35696052, 265006, 264512, 264448, 264288, 29148627, 18108364, 20281149, 18108370, 264629
2780	94678397 (5559, 5560)	Novel Protein sim. GBank gi 4758524 ref NP_004825.1 pHKG - HPK/GCK-like kinase	Contains protein domain (PF00780) - CNH domain	kinase	29146499, 65274791, 264634, 264639
2781	91220057 (5561, 5562)	Novel Protein sim. GBank gi 4689352 gb AAD212221 - (AF069502) ubiquitin specific protease UBP43 [Mus musculus]	Contains protein domain (PF00443) - Ubiquitin carboxy-terminal hydrolase family 2	ubiquitin	60424179, 29331824, 60424269, 66714117, 29331826, 56182435, 87168474, 265017, 264764, 56181562, 21906765, 21906766, 21906768, 35695917, 265020, 33657023, 35695855, 56182323, 87168518
2782	94233146 (5563, 5564)	Novel Protein sim. GBank gi 4505013 ref NP_002310.1 pLRN - leucine-rich neuronal protein	Contains protein domain (PF00560) - Leucine Rich Repeat	struct	65274572, 22278996, 22278998, 60432049, 264259, 29331822, 29331824, 29331826, 60432289, 29331828, 264905, 264907, 264908, 264909, 52644045, 265009, 265017, 265018, 264604, 265019, 264760, 264683, 264288, 264766, 264685, 264688, 264768, 52644229, 264689, 21906768, 265020, 265021, 264691, 18108362, 264692, 33657023, 264693, 33657109, 33657349, 18108370, 264628, 263978, 35695855, 264557, 56182323, 83373044, 18108385

2783	80016629 (5565, 5566)	Novel Protein sim. GBank gi 728831 sp P39188 ALU1_HUMAN - IIII ALU SUBFAMILY J WARNING ENTRY IIII		Im7	264909, 264628, 263978, 263981
2784	87614360 (5587, 5588)				264259, 29331822, 29331824, 29331825, 264482
2785	88071930 (5569, 5570)	Novel Protein sim. GBank gi 2134933 pir J58890 - collapsin response mediator protein - human		UNCLASSIFIED	22278999, 264908, 264758, 265018, 264769, 21906765, 21906768, 21906769, 265020, 264584
2786	87408542 (5571, 5572)	Novel Protein sim. GBank gi 2073564 (U80223) - eukaryotic initiation factor eIF-2 alpha kinase, DGCN2 [Drosophila melanogaster]	Contains protein domain (PF00069) Eukaryotic protein kinase domain	kinase	264905, 265017
2787	87901266 (5573, 5574)	Novel Protein sim. GBank gi 5174507 ref NP_006020.1 pMA11 - paraneoplastic neuronal antigen		UNCLASSIFIED	264768, 21906765, 21906768, 55811957, 22278999, 264093, 60170615, 264259, 29331822, 18108365, 29331824, 33657109, 29331827, 35696052, 264100, 264105, 264908, 263977, 55811576, 264635, 264637, 60433438, 60432113, 265017, 265019, 22279002, 55811150, 264369, 264288
2788	88090644 (5575, 5576)	Novel Protein sim. GBank gi 3252826 (AC004382) - Unknown gene product [Homo sapiens]		UNCLASSIFIED	
2789	85491275 (5577, 5578)	Novel Protein sim. GBank gi 2495729 sp Q92556 Y281_HUMAN - HYPOTHETICAL PROTEIN KIAA0281 (HAG725)		UNCLASSIFIED	264103, 21906769, 264693
2790	87602784 (5579, 5580)	Novel Protein sim. GBank gi 5101772 emb CAB45135.1 - (AJ242978) p621 [Homo sapiens]		strudl	264488, 264769, 284910, 264631, 264636, 264690, 264691, 264259, 264638, 29331824, 264508, 264509, 264905, 264563, 264908, 264628, 18108370, 264907, 264764, 264908, 264288, 264909
2791	88083195 (5581, 5582)	Novel Protein sim. GBank gi 2911266 (AC002550) - Unknown gene product [Homo sapiens]			21906764, 18108368
2792	95083783 (5583, 5584)	Novel Protein sim. GBank gi 2854163 gb AAC02581.1 - (AF045642) No definition line found [Caenorhabditis elegans]			22278996, 22278997, 284259, 29331822, 29331824, 29331825, 66714117, 29331826, 60432289, 29331827, 35696052, 264908, 66712502, 29331830, 264909, 60432229, 60433356, 60433438, 33109954, 265010, 265011, 265017, 265018, 265019, 264682, 264448, 264288, 264369, 264766, 52644229, 21906765, 21906766, 265020, 265021, 33657023, 263974, 18108374, 65274791, 35695855, 264636, 264556, 264558, 56182323, 83373044, 18108385, 56526488, 60432113, 22279000, 264587
2793	87425476 (5585, 5586)			UNCLASSIFIED	264259, 60432289, 66712502, 265009, 264636
2794	85794830 (5587, 5588)			UNCLASSIFIED	264689, 265022, 264691, 18108388, 264567

2795	95334888 (5589, 5590)	Novel Protein sim. GBank gi 5454146 ref NP_008348.1 pUBE2 - ubiquitin-conjugating enzyme E2E 3 (homologous to yeast UBC4/5)	Ubiquitin-conjugating enzyme (PF00179) - ubiquitin	65274572, 56182575, 35696266, 22278988, 22278999, 60432049, 264259, 29331822, 29331825, 66714117, 60432289, 29331826, 29331827, 35698052, 29331828, 264907, 66712502, 56182435, 264511, 265007, 264512, 264910, 60432229, 60433356, 60433438, 33108954, 85658542, 265018, 265019, 264288, 264686, 21906764, 21906765, 21906768, 21906769, 21906768, 55811957, 265020, 265021, 265022, 52844150, 33657023, 264693, 65274620, 33657109, 35696423, 55811576, 65274791, 56182323, 56526486, 60432113, 22279002, 264482, 264563, 264484, 264567
2796	94648857 (5591, 5592)	Novel Protein sim. GBank gi 4680651 gb AAD27715.1 AF13294 - (AF132940) CGI-06 protein [Homo sapiens]	UNCLASSIFIED	18108394, 65274572, 56182575, 56994075, 22278999, 264490, 60432049, 264259, 29331822, 29331824, 29331826, 35696052, 264509, 264908, 264907, 264908, 66712502, 56182435, 264510, 265006, 264512, 265007, 265008, 264910, 265009, 264591, 264592, 60433358, 264594, 264595, 55812038, 264596, 21906754, 60174639, 87188474, 265010, 265011, 265017, 265018, 265019, 55811150, 264762, 18108351, 264448, 264682, 264369, 264288, 264685, 264766, 264687, 56181562, 264769, 264689, 21906765, 21906766, 21906767, 21906768, 21906769, 55811957, 35695917, 265020, 265021, 60170615, 52844150, 264692, 33657023, 18108362, 264693, 65274620, 33657109, 33657182, 27486265, 33657349, 18108374, 35696423, 65274791, 35695955, 264556, 264557, 56182323, 264558, 60170394, 83373044, 65274727, 87168518, 22279000, 264563, 264564, 264565, 264566, 264567
2797	95110760 (5593, 5594)	Novel Protein sim. GBank gi 4838557 gb AAD31040.1 - (AF143859) potassium channel modulatory factor DEBT-91 [Mus musculus]	Contains protein domain (PF00569) - Zinc finger present in dystrophin, CBP/p300	56182575, 22278995, 22278996, 22278997, 29331827, 29148499, 264509, 264906, 56182435, 264757, 21906754, 265010, 265017, 265019, 264681, 264682, 264683, 264686, 21906765, 21906767, 21906768, 21906769, 29148628, 265020, 52844150, 264690, 33657182, 264629, 18108376, 56182323, 22279002, 264563
2798	86198005 (5595, 5596)	Novel Protein sim. GBank gi 2652645 (AF007160) - unknown [Homo sapiens]	UNCLASSIFIED	264488, 264490, 264259, 264448, 20281149, 20281152, 264556, 264557, 264558, 264559, 264483, 264486, 264567

2799	88090651 (5597, 5598)	Novel Protein sim. GBank g j252825 (AC004382) - Unknown gene product [Homo sapiens]		UNCLASSIFIED	22278996, 22278997, 22278998, 22278999, 60432049, 264259, 29331826, 35696052, 29331828, 264909, 60433356, 33657402, 33109954, 87188474, 264448, 52844229, 21906766, 21906767, 21906768, 35695917, 265020, 265021, 265022, 52644150, 35695855, 264634, 60432113, 22279000
2800	88318481 (5599, 5600)	Novel Protein sim. GBank g j4240301[d jBAA74929.1] - (AB020713) KIAA0906 protein [Homo sapiens]		glycoprotein	264488, 56994075, 264259, 20281089, 29331825, 29331827, 264905, 56182435, 265006, 265011, 87168559, 265017, 265019, 264448, 264288, 264766, 264686, 60170815, 264691, 264692, 27486265, 264628, 264629, 264636, 264557, 264558, 264559, 87168518, 264584, 264566, 264567
2801	86068814 (5601, 5602)		Contains protein domain (PF00627) - UBA domain		265007, 264687
2802	88082477 (5603, 5604)	Novel Protein sim. GBank g j2337865 (AC002464) - organic cation transporter; 50% similarity to JC4884 (P1Dg2143892) [Homo sapiens]	Contains protein domain (PF00083) - Sugar (and other) transporter	transport	264448, 35695855
2803	79577446 (5605, 5606)	Novel Protein sim. GBank g j4559388[g jAAD23029.1AC00658 - (AC006585) hypothetical protein [Arabidopsis thaliana]	Contains protein domain (PF01585) - G-patch domain	UNCLASSIFIED	264639
2804	57111131 (5607, 5608)			peptidase	264566
2805	87398486 (5609, 5610)				284092, 264259, 29331822, 29331824, 29331827, 29331828, 264508, 265007, 265009, 21906754, 264369, 264288, 264632, 60170394, 264563, 264482
2806	87898051 (5611, 5612)	Novel Protein sim. GBank g j1168973[sp P44403 CLPB_HAEIN - CLPB PROTEIN		UNCLASSIFIED	22278995, 22278996, 22278999, 264259, 29331822, 29331824, 29331826, 29331827, 29146498, 265008, 265009, 60433438, 265017, 265018, 265019, 264448, 264288, 21906765, 21906767, 21906769, 29148628, 265022, 52644150, 56182323

2807	91720702 (5613, 5614)	Novel Protein sim. GBank gi4468310[emb]CAB37991] - (AL031432) dJ465N24.1 (PUTATIVE novel protein similar to predicted yeast and worm proteins) [Homo sapiens]		UNCLASSIFIED	52644507, 52645156, 52646842, 18108398, 56182575, 22278994, 22278995, 22278996, 56994075, 35696286, 22278997, 22278998, 22278999, 264259, 52645080, 29331822, 29331824, 29331825, 29331826, 35696052, 29331828, 33656970, 264100, 264105, 264907, 52644045, 60433356, 264594, 60433438, 52646317, 21908754, 33109954, 33657084, 52644296, 87168474, 265011, 87168559, 265017, 265018, 265019, 18108351, 264448, 264763, 264687, 52644229, 21906765, 21906766, 21906767, 21906768, 21906769, 35695917, 265021, 265022, 52644150, 33657023, 52645129, 33657109, 33657182, 27486261, 27486262, 27486264, 27486265, 35695763, 18108370, 18108372, 18108374, 18108376, 263977, 18108377, 35696423, 35695855, 52644332, 83373044, 18108385, 18108387, 87168518, 60432113
2808	95359111 (5615, 5616)	Novel Protein sim. GBank gi5541863[emb]CAB51071.1] - (AL096857) hypothetical protein [Homo sapiens]		MHC	60432289, 264510, 265010, 265017, 265018, 264881, 264686, 265021, 264690, 22279000, 264566
2809	88083530 (5617, 5618)	Novel Protein sim. GBank gi2772561 (AC004002) - similar to ciliary dynein beta heavy chain; 76% Similarity to P23098 (PID:g118965) [Homo sapiens]		ATPase associated	18108351
2810	87259032 (5619, 5620)				
2811	91235845 (5621, 5622)				
2812	88093334 (5623, 5624)	Novel Protein sim. GBank gi3264583 (AC005189) - match to ESTs H97758 (NID:g1118643) and AA085546 (NID:g1628773) [Homo sapiens]		UNCLASSIFIED	264569, 22278996, 264091, 264259, 29331828, 29146499, 29148629, 29148784, 264693
2813	91218755 (5625, 5626)	Novel Protein sim. GBank gi4240273[db]BAA74915.1] - (AB020699) KIAA0892 protein [Homo sapiens]		UNCLASSIFIED	22278999, 264259, 66712502, 264693
2814	90980906 (5627, 5628)	Novel Protein sim. GBank gi3548791 (AC005620) - R33590.1 [Homo sapiens]		UNCLASSIFIED	264106
2815	79774521 (5629, 5630)				
2816	95358229 (5631, 5632)	Novel Protein sim. GBank gi5420389[emb]CAB46680.1] - (AJ243460) proteophosphoglycan [Leishmania major]	Contains protein domain (PF00170) - bZIP transcription factor	transcription factor	56182575, 29331828, 264906, 66712502, 55811386, 265017, 265018, 265019, 264683, 265020, 87168518, 60432113
					65274572
					264907, 264909
					264488, 35696286, 29331825, 29331826, 264508, 264509, 264905, 264906, 264907, 264908, 264909, 264511, 264910, 265011, 264760, 264681, 264766, 264769, 264689, 21906765, 264693, 264628, 18108370, 264629, 264631, 264634, 264563, 264564, 264566, 264486

2817	87749542 (5633, 5634)	Novel Protein sim. GBank gi 1293846 (U56966) - coded for by C. elegans cDNA yk30b3.5; coded for by C. elegans cDNA yk30b3.3 [Caenorhabditis elegans]				264259, 29331822, 29331827, 264508, 264509, 264905, 264907, 264908, 264909, 56182435, 264510, 265008, 264511, 264512, 264593, 264758, 265010, 264760, 264761, 264764, 264288, 264887, 264769, 55811957, 35695917, 33657109, 263978, 264634, 264636, 264639, 264564, 264565, 264566, 264488, 264567
2818	88073576 (5635, 5636)	Novel Protein sim. GBank gi 549986 (U13149) - possible asposory-associated protein [Pennisetum ciliare]	Contains protein domain (PF00023) - Ank repeat	UNCLASSIFIED		66712502
2819	87793527 (5637, 5638)			UNCLASSIFIED		264909, 264511
2820	87765744 (5639, 5640)	Novel Protein sim. GBank gi 4929773 (gb AAD34147.1 AF15209) - (AF15209) CGI-05 protein [Homo sapiens]	Contains protein domain (PF00919) - Uncharacterized protein family UPF0004	UNCLASSIFIED		18108394, 52646365, 52644045, 264112, 265009, 21906754, 265017, 18108351, 264683, 264369, 264686, 264769, 21906769, 33657023, 33657109, 18108370, 18108374, 18108377, 18108385
2821	95320511 (5641, 5642)	Novel Protein sim. GBank gi 399144 (sp P02747 C1QC_HUMAN - COMPLEMENT C1Q SUBCOMPONENT, C CHAIN PRECURSOR	Contains protein domain (PF00386) - C1q domain	complement		264636
2822	94260221 (5643, 5644)	Novel Protein sim. GBank gi 2224671 (db BAA20820) - (AB002363) KIAA0365 [Homo sapiens]		UNCLASSIFIED		264259, 29331822, 60432289, 264905, 60433356, 33657402, 265011, 264760, 21906765, 60170815, 264638
2823	95320513 (5645, 5646)	Novel Protein sim. GBank gi 399144 (sp P02747 C1QC_HUMAN - COMPLEMENT C1Q SUBCOMPONENT, C CHAIN PRECURSOR	Contains protein domain (PF00386) - C1q domain	complement		264766
2824	95320515 (5647, 5648)	Novel Protein sim. GBank gi 399144 (sp P02747 C1QC_HUMAN - COMPLEMENT C1Q SUBCOMPONENT, C CHAIN PRECURSOR		UNCLASSIFIED		264907
2825	19742170 (5649, 5650)					264760
2826	94311905 (5651, 5652)	Novel Protein sim. GBank gi 3859683 (emb CAA22020) - (AL033503) conserved hypothetical protein [Candida albicans]				52645156, 22278994, 35696286, 22278997, 22278998, 52645080, 29331822, 29331824, 29331825, 29331827, 35696052, 29331828, 33656970, 52644045, 52646317, 33657084, 52644296, 265017, 265018, 265019, 264288, 21906764, 21906765, 21906766, 21906767, 21906769, 35695917, 52644150, 33657109, 33657182, 27486261, 27486262, 33657349, 27486265, 35695763, 35696423, 35695855, 52644332, 18108385, 87168518, 264484

2827	95320519 (5653, 5654)	Novel Protein sim. GBank gi 399144 sp P02747 C1QC_HUMAN - COMPLEMENT C1Q SUBCOMPONENT, C CHAIN PRECURSOR	Contains protein domain (PF00386) - C1q domain	complement	264488, 263394, 264489, 55274572, 29331822, 66714117, 29331827, 29331828, 264508, 264905, 264509, 264906, 264907, 264908, 264909, 264510, 265006, 264511, 265007, 264512, 285008, 284910, 284591, 60432229, 284592, 264593, 264595, 264596, 21906754, 265011, 264600, 264601, 284602, 265017, 264604, 264605, 264288, 264766, 264767, 264689, 55811957, 264534, 264690, 264691, 264692, 264693, 263972, 264629, 35895855, 264631, 264634, 264635, 264555, 264636, 264637, 264556, 264638, 264558, 83373044, 18108385, 60432113, 22279002, 264563, 264564, 264585, 264566, 264567, 264486, 18108391
2828	91220615 (5655, 5656)	Novel Protein sim. GBank gi 3598974 (AF077000) - protein tyrosine phosphatase TD14 [Rattus norvegicus]	Contains protein domain (PF00102) - Protein-tyrosine phosphatase	phosphatase	29331822, 35896052, 264104, 264908, 265007, 264591, 265010, 265011, 265019, 264766, 264686, 55811957, 18108370, 18108374, 55810764, 35896423, 55811576, 56182323, 83373044, 87188518
2829	87651244 (5657, 5658)	Novel Protein sim. GBank gi 4680869 gb AA027734.1 AF13295 - (AF132959) CGI-25 protein [Homo sapiens]			22278996, 22278997, 264091, 264093, 60432049, 264259, 29331822, 29331825, 29331827, 29331828, 264905, 264509, 66712502, 264510, 264511, 264593, 60433438, 21906754, 265011, 264603, 18108351, 264288, 21908765, 21906768, 21906769, 29148629, 52644150, 264693, 33657109, 18108374, 264634, 18108385, 60432113, 22279000, 264555, 264488, 265008, 265019, 264639, 22279002
2830	88087109 (5659, 5660)	Novel Protein sim. GBank gi 2498667 sp Q61200 NPH1_MOUSE - NEUREXOPHILIN 1			
2831	87614717 (5661, 5662)			UNCLASSIFIED	265017
2832	87631809 (5663, 5664)			UNCLASSIFIED	22278997, 22278999, 52646317, 264288, 264688, 21906767, 60431528, 264638, 22279000
2833	87612938 (5665, 5666)	Novel Protein sim. GBank gi 5262615 emb CAB45747.1 - (AL080156) hypothetical protein [Homo sapiens]		UNCLASSIFIED	264555, 264556, 264558
2834	86974703 (5667, 5668)	Novel Protein sim. GBank gi 2224567 dbj BAA20772 - (AB002311) KIAA0313 [Homo sapiens]			263972
2835	87775712 (5669, 5670)	Novel Protein sim. GBank gi 4589532 dbj BAA76788.1 - (AB023161) KIAA0944 protein [Homo sapiens]		ATPase-associated	60432289, 29331828, 285008, 265010, 265017, 264448, 55811957, 265020, 18108370
2836	85724748 (5671, 5672)	Novel Protein sim. GBank gi 2331568 (U76618) - N-RAP [Mus musculus]	Contains protein domain (PF00412) - LIM domain containing proteins	transcript factor	264259, 264112, 265010, 264762, 264764, 263974, 264555, 264558, 264559

2837	87766482 (5673, 5674)	Novel Protein sim. GBank gi 5420387 emb CAB46679.1 - (AJ243459) proteophosphoglycan [Leishmania major]		UNCLASSIFIED	18108394, 22278997, 22278998, 29331822, 264907, 264909, 265006, 265007, 265018, 265019, 264682, 264288, 21906766, 21906767, 55811957, 35685917, 18108374, 56182323, 22279000, 22279002
2838	87775392 (5675, 5676)	Novel Protein sim. GBank gi 973378 (U31263) - core protein [Hepatitis C virus]		UNCLASSIFIED	18108394, 18108387, 264259, 29331826, 265007, 265019, 264448, 18108388, 20281149, 264565, 264567
2839	85799317 (5677, 5678)	Novel Protein sim. GBank gi 1575515 (U64899) - thrombospondin-related anonymous protein [Plasmodium gallinaceum]		UNCLASSIFIED	264555
2840	87774665 (5679, 5680)	Novel Protein sim. GBank gi 2224605 dbj BAA20790 - (AB002330) KIAA0332 [Homo sapiens]			264509, 264511, 265011, 264288, 264769, 265020, 264634, 264638, 264556
2841	86982568 (5681, 5682)	Novel Protein sim. GBank gi 2224605 dbj BAA20790 - (AB002330) KIAA0332 [Homo sapiens]	Contains protein domain (PF00076) - dna_rna_bind RNA recognition motif (a.k.a. RRM, RBD, or RNP domain)		56182575, 35696052, 264907, 264908, 264909, 264910, 264593, 264595, 264766, 265022, 264691, 33657182, 35695763, 18108370, 35695855, 264631, 264559, 264593, 264587
2842	80080086 (5683, 5684)	Novel Protein sim. GBank gi 5578957 emb CAB51350.1 - (AL050306) dJ475B7.1 (novel KIAA0615 and KIAA0323 LIKE protein) [Homo sapiens]		UNCLASSIFIED	264600
2843	91012494 (5685, 5686)	Novel Protein sim. GBank gi 5578957 emb CAB51350.1 - (AL050306) dJ475B7.1 (novel KIAA0615 and KIAA0323 LIKE protein) [Homo sapiens]		UNCLASSIFIED	264908, 264907, 264908, 264909, 264910, 264764, 35695855, 83373044, 18108385
2844	56731154 (5687, 5688)	Novel Protein sim. GBank gi 5578957 emb CAB51350.1 - (AL050306) dJ475B7.1 (novel KIAA0615 and KIAA0323 LIKE protein) [Homo sapiens]	Contains protein domain (PF00008) - EGF-like domain		264685
2845	94321719 (5689, 5690)	Novel Protein sim. GBank gi 5420387 emb CAB46679.1 - (AJ243459) proteophosphoglycan [Leishmania major]	homeobox		28146498, 87168474, 264686, 35696423, 83373044, 264564
2846	88318613 (5691, 5692)	Novel Protein sim. GBank gi 5308263 gb AAD41995.1 AC006233) unknown protein [Arabidopsis thaliana]		UNCLASSIFIED	29331830, 264909, 265008, 265011, 87168559, 264629, 264558
2847	81811757 (5693, 5694)	Novel Protein sim. GBank gi 3399676 (AC005390) - R31180.1 [Homo sapiens]		UNCLASSIFIED	264908, 264766, 264769, 264629, 264637, 264566
2848	87612943 (5695, 5696)	Novel Protein sim. GBank gi 5262615 emb CAB45747.1 - (AL080156) hypothetical protein [Homo sapiens]		UNCLASSIFIED	264490, 264259, 264508, 264905, 264907, 264510, 265007, 265008, 264591, 264592, 264593, 264594, 264595, 55812038, 265010, 265011, 264604, 264763, 264764, 264765, 264766, 264686, 264628, 264629, 264555, 264636, 264556, 264557, 264638, 264558, 264559, 264563, 264566, 264567
2849	88084283 (5697, 5698)	Novel Protein sim. GBank gi 3342218 (AC004131) - Unknown gene product [Homo sapiens]			29331822, 35696052, 264509, 264906, 265007, 264594, 265018, 264288, 263972, 35696423, 18108384, 56526486, 18108390
2850	87623636 (5699, 5700)			UNCLASSIFIED	35696286, 265008, 265009, 265018, 264288, 35695917, 264693, 18108374, 35695855, 22279000

2851	87820548 (5701, 5702)	Novel Protein sim. GBank gij4321619[gbjAAD15788.1] - (AF051098) seven transmembrane domain orphan receptor [Mus musculus]		UNCLASSIFIED	264906, 264907, 56182435, 264758, 55811386, 265010, 18108351, 264448, 264369, 21906765, 264691, 264692, 264693, 35695855, 264556, 18108385, 264567, 264591
2852	86987023 (5703, 5704)	Novel Protein sim. GBank gij1825729 (U88308) - similar to drosophila membrane protein PATCHED SP-P18502 (PID:g128645) [Caenorhabditis elegans]		UNCLASSIFIED	
2853	87784630 (5705, 5706)	Novel Protein sim. GBank gij2702347 (AF027503) - putative membrane-associated guanylate kinase 1 [Mus musculus]	Contains protein domain (PF00397) - WW domain	kinase	56182575, 55811150, 264690, 27486262, 27486265, 264632, 56182323, 56526486, 22279002
2854	88083557 (5707, 5708)	Novel Protein sim. GBank gij2795825 (AC004021) - ketch protein; ring canal component involved in cytoplasmic bridges; 77% Similarity to A45773 (PID:g1079096) [Homo sapiens]	Contains protein domain (PF01344) - Ketch motif	dna_rna_bind	35696286, 29331824, 29331826, 29331828, 264908, 264768, 264693, 22279002, 264482
2855	94723856 (5709, 5710)	Novel Protein sim. GBank gij1504040[dbjBAA13219] - (D86983) similar to D.melanogaster peroxidasin(U11052) [Homo sapiens]	Contains protein domain (PF00560) - Leucine Rich Repeat	glycoprotein	22278994, 29331822, 29331824, 29331825, 264906, 264908, 265009, 33109954, 265018, 265019, 264448, 21906765, 265020, 264690, 27486265, 83373044, 22279000, 22279002, 264482
2856	88083359 (5711, 5712)	Novel Protein sim. GBank gij3264583 (AC005189) - match to ESTs H97758 (NID:g1118643) and AA085546 (NID:g1628773) [Homo sapiens]			21906766, 22278997, 265022, 29331822, 29331826, 27486282, 265007, 265009, 265017, 264482, 264563, 18108351
2857	95348286 (5713, 5714)	Novel Protein sim. GBank gij3041855 (AC004537) - similar to tumor suppressor p33ING1; similar to AF044076 (PID:g2829208) [Homo sapiens]	Contains protein domain (PF00628) - PHD-finger	struct	22278995, 35696286, 29331824, 29331825, 35696052, 264103, 264108, 56182435, 21906765, 21906769, 265020, 18108368, 35695763, 22279002, 264563
2858	87434748 (5715, 5716)	Novel Protein sim. GBank gij462585[spP35227]ME18_HUMAN - DNA-BINDING PROTEIN MEL-18 (ZINC FINGER PROTEIN 144)	Contains protein domain (PF00097) - Zinc finger, C3HC4 type (RING finger)	dna_rna_bind	264569, 264887, 22278995, 22278996, 22278997, 22278999, 264259, 29331826, 29331827, 29331828, 264509, 264905, 264906, 29331830, 264908, 52644045, 264909, 264511, 264512, 265007, 265008, 264910, 265009, 264593, 60433356, 264595, 264758, 21906754, 265010, 265011, 264604, 265018, 264760, 18108351, 264763, 264682, 264764, 264765, 264288, 264369, 264685, 264766, 264768, 18108357, 264769, 21906766, 21906767, 265021, 264534, 60170615, 264691, 264692, 18108370, 264629, 18108374, 264631, 264636, 263981, 18108381, 264558, 18108385, 22279002, 264584, 264566, 264486, 264567, 60424179, 65274572, 29331828, 264905, 264511, 264758, 265011, 21906767, 21906769, 55811957, 265021, 56182323
2859	90937675 (5717, 5718)	Novel Protein sim. GBank gij4325320[gbjAAD17331.1] - (AF124427) claudin-15 [Mus musculus]		UNCLASSIFIED	

2860	87532589 (5719, 5720)	Novel Protein sim. GBank gi 4469186 emb CAB38414.1 - (AL031588) dJ1163J1.2.1 (novel protein similar to C. elegans B0035.16 and bacterial RNA (5-Methylaminomethyl-2-thiouridyate)-Methyltransferases) (isoform 1) [Homo sapiens]		UNCLASSIFIED	264259, 29331822, 29331824, 29331825, 29331826, 29331827, 29331828, 264510, 264511, 33109954, 18108351, 264683, 264765, 264369, 264686, 21906785, 264691, 264692, 264893, 18108388, 22279002, 264482
2861	86698507 (5721, 5722)	Novel Protein sim. GBank gi 3941730 (AF108083) - BS4 [Homo sapiens]			264369, 264692
2862	87569385 (5723, 5724)	Novel Protein sim. GBank gi 4505013 ref NP_002310.1 pLRN - leucine-rich neuronal protein		UNCLASSIFIED	264691, 264638
2863	91220421 (5725, 5726)	Novel Protein sim. GBank gi 3248088 (AC004473) - Contains similarity to goliath protein gi M97204 from D. melanogaster. [Arabidopsis thaliana]	Contains protein domain (PF000096) - struct Zinc finger, C2H2 type		56994075, 35686286, 22278998, 29331822, 29331824, 35686052, 29331828, 264106, 264511, 55812038, 33657084, 55811386, 265018, 265019, 21906765, 21906768, 21906769, 35695917, 265020, 265022, 33657023, 33657109, 33657349, 264629, 18108376, 60431850, 56182323, 18108385, 18108387, 87168518, 22279002
2864	87420030 (5727, 5728)	Novel Protein sim. GBank gi 1079451 pr A55463 - tropomodulin, skeletal muscle - chicken		struct	264259, 264910
2865	95312191 (5729, 5730)	Novel Protein sim. GBank gi 438840 (L19048) - MSA-2 [Plasmodium falciparum]			22278995, 21906764, 264482
2866	95105480 (5731, 5732)	Novel Protein sim. GBank gi 585703 sp Q07066 PMP2_RAT - 22 KD PEROXISOMAL MEMBRANE PROTEIN		glycoprotein	65274572, 22278996, 22278998, 22278999, 264259, 29331824, 29331827, 29331828, 60433438, 21906754, 265018, 284448, 264764, 52844150, 83373044
2867	86908001 (5733, 5734)	Novel Protein sim. GBank gi 4580897 gb AAD24571.1 AF12108 - (AF121081) cAMP inducible 2 protein [Mus musculus]		UNCLASSIFIED	264488, 264768, 21906768, 22278998, 265022, 264259, 264508, 264905, 264907, 264511, 264910, 264635, 264636, 264637, 265011, 265017, 265018, 265019, 264563, 264088, 264566, 264764, 264369, 264567, 264486, 264288, 264766

2868	95303283 (5735, 5736)	Novel Protein sim. GBank gj11292868[emb]CAA639231 - (X94232) t-Cell activation protein [Homo sapiens]		18108392, 264488, 22278994, 22278997, 22278998, 22278999, 60432049, 264259, 29331822, 29331824, 29331825, 60432289, 29331826, 29331827, 35696052, 29331828, 264508, 52644045, 264828, 265006, 265007, 265008, 265009, 264591, 60432228, 264593, 60433356, 264595, 21906754, 265017, 265019, 264682, 264369, 21906765, 21906766, 21906767, 21906768, 265021, 265022, 264691, 33657182, 18108368, 27486261, 27486262, 27486264, 27486265, 18108370, 18108374, 35698423, 35695855, 264632, 56182323, 87168518, 264404, 22279000, 22279002, 264482, 264563, 264564, 264567, 264487
2869	88094412 (5737, 5738)		UNCLASSIFIED	264369
2870	8404574 (5739, 5740)		UNCLASSIFIED	264905, 264908, 264764, 21906769, 264634
2871	88318621 (5741, 5742)	Novel Protein sim. GBank gj15306263[gb]AAD41995.1(AC006233) unknown protein [Arabidopsis thaliana]	UNCLASSIFIED	264259, 29331822, 60432289, 29331827, 264907, 265008, 265017, 265018, 264682, 264764, 18108354, 265021, 27486265, 264629, 18108387, 264567
2872	95312197 (5743, 5744)	Novel Protein sim. GBank gj112205[pir]B39066 - proline-rich protein 15 - rat	kinase	263981
2873	88094252 (5745, 5746)		UNCLASSIFIED	264488, 18108374, 264768, 264687, 264688, 264689, 35696423, 35696286, 35695917, 264510, 264511, 265007, 264512, 265008, 264910, 264534, 264634, 264635, 264555, 264592, 264259, 264558, 60433438, 60432289, 35696052, 265011, 264600, 264601, 60432113, 264508, 264563, 264482, 264509, 264905, 264906, 264564, 18108351, 264763, 18108370, 264907, 264566, 264908, 264764, 264288, 264567, 264909, 264486, 264766, 18108391

2874	94313549 (5747, 5748)	Novel Protein sim. GBank gij3212854 (AC004005) - unknown protein [Arabidopsis thaliana]	UNCLASSIFIED	5264507, 52645156, 52646365, 56182575, 22278994, 22278995, 56994075, 35696286, 60432049, 264259, 52645080, 29331822, 56182181, 29331824, 60424269, 29331825, 56714117, 29331826, 29331827, 35696052, 29331828, 33656970, 66712502, 52644045, 265007, 265009, 60433356, 264758, 55812038, 18108348, 52646317, 33109954, 33657084, 265017, 264604, 265018, 265019, 264682, 264369, 264288, 264688, 52644229, 21906766, 21906767, 21906768, 55811957, 265020, 265021, 265022, 52644150, 33657023, 52645129, 18108374, 18108376, 35696423, 56182323, 18108387, 87168518, 60432113, 22279000, 22279002, 264563, 264565
2875	88083726 (5749, 5750)	Novel Protein sim. GBank gij2781386 (AC004010) - similar to Leucine-rich transmembrane proteins; 44% similarity to U42767 (PID:g1736918) [Homo sapiens]	glycoprotein	22278996, 22278997, 22278999, 29331826, 29331828, 29146499, 66712502, 265008, 265017, 18108351, 264683, 264689, 21906767, 18108376, 18108377, 55811576, 60170394, 22279000, 264487
2876	88080854 (5751, 5752)	Novel Protein sim. GBank gij2978530 (AC004449) - R33683_2 [Homo sapiens]	Igf	
2877	94747029 (5753, 5754)	Novel Protein sim. GBank gij4704208 [CAB41646.1] - (AL035419) d11100H13.1 (putative novel protein) [Homo sapiens]		52646365, 65274572, 56182575, 22278997, 22278998, 22278999, 60432049, 52645080, 60424269, 60432289, 29331827, 35696052, 29331828, 66712502, 52644045, 56182435, 60433358, 33657402, 33657084, 265019, 55811150, 264448, 264369, 21906766, 21906768, 21906769, 265020, 33657023, 33657109, 33657182, 27486262, 264629, 60431528, 55811576, 52644332, 56182323, 264558, 83373044, 18108385, 56526486, 60432113, 22279000, 22279002, 264563
2878	88085309 (5755, 5756)	Novel Protein sim. GBank gij3876775 [CAB03067] - (Z81077) predicted using GeneFINDER. Similarity to Yeast protein 8248 (TR:G587531) [Caenorhabditis elegans]	UNCLASSIFIED	264488, 264259, 29331822, 29331826, 264905, 264509, 264907, 264909, 264510, 265006, 264511, 264512, 33657402, 264758, 21906754, 18108351, 264681, 264682, 264288, 264684, 264685, 264768, 264689, 21906769, 264690, 33657023, 264693, 18108364, 33657109, 264629, 18108374, 264630, 264632, 264556, 264637, 264639, 264558, 18108385, 18108387, 264563, 264564, 264565, 264566, 264486, 264567

2879	87889122 (5757, 5768)	Novel Protein sim. GBank gl 4895145 gb AAD32752.1 - (AF127374) unknown [Streptomyces lavendulae]	Contains protein domain (PF00315) - Uracil-DNA glycosylase	UNCLASSIFIED	18108359, 264259, 264905, 18108370, 264629, 264908, 264909, 18108374, 18108377, 265006, 264910, 264637, 60170394, 264559, 265017, 264564, 264585, 264587, 264584, 264369
2880	94851439 (5759, 5760)	Novel Protein sim. GBank gl 4680703 gb AAD27741.1 (AF13296) CGI-32 protein [Homo sapiens]			264488, 5264635, 52646842, 2278994, 35696288, 22278998, 22278999, 264259, 29331822, 29331824, 29331825, 29331826, 29331827, 35696052, 29331828, 264107, 264508, 264509, 264905, 264906, 264907, 264908, 264909, 52644045, 264510, 265006, 264511, 265007, 264512, 265009, 264910, 264594, 21906754, 52646317, 52644286, 87168559, 264600, 264604, 264605, 264760, 264764, 264288, 264766, 264768, 264687, 264769, 21906766, 21906769, 35695917, 265021, 264690, 264692, 33657023, 52645129, 33657109, 33657182, 27486262, 33657349, 264629, 18108374, 35695855, 264634, 264635, 264636, 264637, 264638, 264557, 52644332, 264558, 264559, 83373044, 264404, 22279000, 264563, 264483, 264567, 264486
2881	87650539 (5761, 5762)	Novel Protein sim. GBank gl 733571 (U23452) - No definition line found [Caenorhabditis elegans]		UNCLASSIFIED	22278998, 29331822, 52644045, 21906765, 264639, 60432113
2882	87714367 (5763, 5764)	Novel Protein sim. GBank gl 118112 (U41559) - No definition line found [Caenorhabditis elegans]			264488, 22278996, 22278999, 29331822, 29331826, 264908, 60170831, 60433356, 55812038, 264681, 264682, 264686, 264687, 264688, 21906768, 21906769, 264693, 263967, 18108374, 55811578, 56182323, 22279002, 264566
2883	85362875 (5765, 5766)	Novel Protein sim. GBank gl 468008 gb AAD31087.1 (AF10693) vitamin D receptor-interacting protein [Homo sapiens]	Contains protein domain (PF00400) - WD domain, G-beta repeat	UNCLASSIFIED	264112, 264682
2884	87784643 (5767, 5768)	Novel Protein sim. GBank gl 2224697 db BAA20832 - (AB002376) KIAA0378 [Homo sapiens]			265018, 264634
2885	83006306 (5769, 5770)	Novel Protein sim. GBank gl 2224697 db BAA20832 - (AB002376) KIAA0378 [Homo sapiens]		UNCLASSIFIED	264686, 264693
2886	91237823 (5771, 5772)	Novel Protein sim. GBank gl 1255889 (U53344) - T07H6.5 gene product [Caenorhabditis elegans]	Contains protein domain (PF00084) - Sushi domain (SCR repeat)	complementrecept	60432049, 264259, 29331828, 264908, 264511, 264595, 60433438, 264596, 265017, 264605, 263969, 263972, 264555, 83373044, 87168518, 264566
2887	91227860 (5773, 5774)	Novel Protein sim. GBank gl 3882323 db BAA34521.1 - (AB018344) KIAA0801 protein [Homo sapiens]		UNCLASSIFIED	18108351, 264686, 264629, 264631, 264639, 83373044, 264482
2888	95105816 (5775, 5776)	Novel Protein sim. GBank gl 4508015 ref NP_003447.1 pZNF2 - zinc finger protein 205 [Homo sapiens]	Contains protein domain (PF00098) - Zinc finger, C2H2 type	transcriptfactor	264488, 264259, 29331828, 264508, 264906, 264593, 264758, 264765, 264769, 18108374, 83373044, 264486

2889	87606562 (5777, 5778)			UNCLASSIFIED	56994075, 29331824, 265009, 264760, 18108354, 264288
2890	78703853 (5778, 5780)	Novel Protein sim. GBank gi 854055 emb CAA583371 - (X83413) U88 [Human herpesvirus 6]		UNCLASSIFIED	264591, 264766
2891	88094428 (5781, 5782)	Novel Protein sim. GBank gi 3877750 emb CAB01508] - (Z78064) predicted using Genefinder; similar to collagen; cDNA EST EMBL:D65865 comes from this gene; cDNA EST EMBL:D69451 comes from this gene; cDNA EST EMBL:D66026 comes from this gene; cDNA EST EMBL:D69658 comes from this gen...		UNCLASSIFIED	264591, 264595, 264369, 264685, 264693, 264628, 264563, 264566
2892	95418745 (5783, 5784)	Novel Protein sim. GBank gi 4929759 gb AAD34140.1 AF15190 - (AF151903) CGI-145 protein [Homo sapiens]		UNCLASSIFIED	65274572, 35696286, 29331828, 264110, 265009, 60433438, 265018, 265019, 18108351, 264288, 21906765, 21908766, 21906769, 55811857, 264690, 65274620, 263967, 35695855
2893	87788014 (5785, 5786)			UNCLASSIFIED	264259, 265010, 264682, 18108370, 264555, 264556
2894	87755985 (5787, 5788)	Novel Protein sim. GBank gi 5689015 gb AAD46135.1] - (AF080171) zinc finger protein ZNF232 [Homo sapiens]	Contains protein domain (PF000096) - Zinc finger, C2H2 type	transcript factor	264259, 265006, 60433438, 52644296, 265011, 264389, 35695917, 18108381, 18108382, 18108388
2895	86938778 (5789, 5780)	Novel Protein sim. GBank gi 3924708 emb CAA84846] - (Z35597) Weak similarity with sea squirt nidogen precursor protein (blastp score 71); cDNA EST EMBL:T02069 comes from this gene; cDNA EST EMBL:D76135 comes from this gene; cDNA EST EMBL:D73147 comes from this gene; cDNA EST EMB...	Contains protein domain (PF01437) - Plexin repeat		29331824, 265007, 264762, 264636, 264563
2896	87752122 (5791, 5792)	Novel Protein sim. GBank gi 4885548 ref NP_005456.1 pPKBG - protein kinase B gamma	Contains protein domain (PF000099) - Eukaryotic protein kinase domain	kinase	18108382, 18108394, 18108398, 22278998, 264259, 29331822, 29331824, 29148499, 264906, 264908, 265007, 265009, 265018, 265019, 264389, 264685, 264689, 21908766, 265021, 264693, 33657182, 264639, 18108384, 18108388, 264567
2897	95413057 (5793, 5794)	Novel Protein sim. GBank gi 450287 ref NP_001296.1 pCLDN - Clostridium perfringens enterotoxin receptor 1		UNCLASSIFIED	60424179, 56182575, 22278996, 35696286, 22278997, 22278999, 60432049, 264259, 29331824, 29331825, 60424269, 60432289, 29331826, 29331828, 35696052, 264908, 56182435, 265009, 264910, 60170831, 60431735, 60433356, 60433438, 65274444, 55811386, 265018, 18108351, 264448, 264288, 264687, 21906765, 21906766, 21906767, 21906769, 55811857, 35695917, 264534, 33657023, 33657109, 35695763, 264628, 264629, 60431528, 18108374, 55810764, 55811576, 35696423, 35695855, 264555, 56182323, 18108385, 264404, 22279000, 22279002, 264566
2898	87750340 (5795, 5796)			UNCLASSIFIED	22278995, 264604, 18108385, 264566

2898	80357670 (5787, 5789)	Novel Protein sim. GBank gi 4581470 emb CAB40137.1 - (Y18483) SLC7A8 protein [Homo sapiens]		UNCLASSIFIED	264764, 21906764, 264692 65274572, 56182575, 35696286, 60432049, 264259, 29331824, 66714117, 29331826, 35696052, 29331828, 66712502, 56182435, 265006, 265007, 265009, 60433356, 264758, 265018, 264764, 264765, 264288, 264768, 21906764, 21906769, 265020, 264692, 264693, 32833986, 264631, 83373044, 60432113
2901	87444731 (5801, 5802)	Novel Protein sim. GBank gi 4759272 ref NP_004614.1 pTTC4 - tetrairicopeptide repeat domain 4		phosphatase	22278895, 22278997, 22278999, 60432049, 29331822, 29331824, 29331825, 29331827, 35696052, 33656970, 264910, 265009, 21906754, 33657084, 87168474, 265010, 265018, 21908764, 21908765, 21906766, 21906767, 21906769, 33657023, 264693, 33657109, 33657349, 35696423, 35695855, 263981, 56182323, 22279002
2902	85745271 (5803, 5804)	Novel Protein sim. GBank gi 2414615 emb CAB16364 - (Z99259) hypothetical protein [Schizosaccharomyces pombe]			264683, 264691
2903	87606733 (5805, 5806)	Novel Protein sim. GBank gi 1079318 pir S52241 - XLCL2 protein - African clawed frog			264887, 22278994, 264259, 29331826, 29331828, 264905, 52644045, 56182435, 264511, 265017, 265018, 18108351, 264448, 264683, 264769, 264689, 35695917, 52644150, 87168518, 60432113, 22279002
2904	86458072 (5807, 5808)	Novel Protein sim. GBank gi 5639823 gb AAD45885.1 AF14367 - (AF143676) multispanning nuclear envelope membrane protein nurim [Homo sapiens]		UNCLASSIFIED	52646365, 22278999, 264259, 35696052, 265011, 265017, 264683, 264769, 35695917, 265020, 263987, 18108374, 35695855, 264637, 264952, 18108385, 18108387
2905	84449926 (5809, 5810)	Novel Protein sim. GBank gi 728837 sp P39194 ALU7_HUMAN - IIII ALU SUBFAMILY SQ WARNING ENTRY IIII		oncogene	265009, 264681, 264682
2906	86341051 (5811, 5812)	Novel Protein sim. GBank gi 4689256 gb AAD2783.1 AF12185 - (AF121858) sorting nexin 8 [Homo sapiens]	Contains protein domain (PF00787) - PX domain	UNCLASSIFIED	22278896, 35696286, 22278998, 264259, 60432289, 29331828, 29331830, 66712502, 265009, 60170831, 33109954, 264448, 264683, 264288, 264689, 21906766, 21906767, 21906768, 55811957, 35695917, 265022, 52644150, 264691, 33657023, 264692, 264693, 35695855, 60432113, 264566

2807	91211383 (5813, 5814)	Novel Protein sim. GBank gij1707079 (U80451) - contains strong similarity to a DNAJ-like domain (PS:PS00636) [Caenorhabditis elegans]	Contains protein domain (PF00226) - eph DnaJ domain	52644507, 56182575, 56181686, 22278995, 56994075, 35696286, 60432049, 56182181, 35696052, 60431735, 264595, 55812038, 21906754, 55811386, 265019, 264682, 264369, 56181562, 21906768, 55811957, 35695917, 265020, 265021, 33657023, 33657109, 60431528, 55811576, 35696423, 35695655, 264638, 22279000
2808	80414246 (5815, 5816)	Novel Protein sim. GBank gij2673917 (AC002561) - putative ATP-dependent RNA helicase [Arabidopsis thaliana]	helicase	265009, 33109954, 18108351, 264786, 265021, 264691, 264692, 18108374, 264556, 264638, 264557, 264558
2809	87420225 (5817, 5818)		eph	264259, 87168474, 265018, 18108365, 264628
2810	86601075 (5819, 5820)	Novel Protein sim. GBank gij4539335 [emb] (CAB37483.1) - (AL035539) putative protein [Arabidopsis thaliana]		22278995, 264509, 264512, 265007, 33657402, 265017, 264369, 265022, 18108365, 264628
2811	94216615 (5821, 5822)	Novel Protein sim. GBank gij4469187 [emb] (CAB38415.1) - (AL031588) dJ1163J1.3 (novel protein similar to mouse B99) [Homo sapiens]	glucoamylase	52646365, 18108397, 22278995, 22278997, 22278998, 22278999, 29331824, 29331825, 52644045, 265008, 265018, 264448, 21906765, 21906766, 21906767, 21906768, 21906769, 55811957, 265021, 18108370, 18108372, 18108374, 22279000
2812	87731803 (5823, 5824)	Novel Protein sim. GBank gij4929837 [gb] (AAD34079.1) (AF15184 - (AF151842) CGI-84 protein [Homo sapiens])	Contains protein domain (PF00904) - involucrin repeat	52645156, 264092, 60432049, 264259, 52645080, 29331824, 29331825, 86712502, 33109954, 264760, 264683, 264288, 264686, 265021, 264693, 18108388, 263976, 264404
2813	87713823 (5825, 5826)	Novel Protein sim. GBank gij854065 [emb] (CAA58337) - (X83413) U88 [Human herpesvirus 6]	UNCLASSIFIED Zinc finger, C2H2 type	52644507, 52645156, 52646842, 56182575, 35696286, 22278997, 264259, 52645080, 29331827, 35696052, 29331828, 264628, 52644045, 56182435, 55812038, 52646317, 21906754, 52644296, 87168474, 265017, 265018, 265019, 18108351, 264682, 264686, 264689, 21906765, 21906766, 21906767, 21906768, 35695917, 265020, 52644150, 27486261, 27486262, 27486265, 35695763, 55811576, 35695855, 52644332, 22279000, 22279002, 264563
2814	87797300 (5827, 5828)			264557

2915	86081072 (5828, 5830)	Novel Protein sim. GBank gil5174485jrefjNP_006030.1lpK/AA - endocytic receptor (macrophage mannose receptor family)	Contains protein domain (PF00059) - Lectin C-type domain	eph	264569, 264488, 264687, 264766, 21906766, 52646842, 21906767, 21908768, 58182575, 29148629, 35695917, 22278996, 22278997, 22278998, 265021, 22278999, 52644150, 264691, 264259, 60432049, 264692, 52645129, 33657109, 33657182, 29331827, 27486261, 35696052, 29331828, 27486262, 27486264, 27486285, 33657349, 29146498, 29146499, 264908, 264907, 18108370, 264908, 18108372, 52644045, 18108374, 56182435, 35695855, 264112, 264510, 265008, 60432229, 264593, 60433356, 56182323, 18108382, 55812038, 18108385, 33109954, 21906764, 33657084, 87168518, 265010, 265011, 60432113, 265017, 265018, 22279000, 265019, 55811150, 264681, 18108351, 264763, 264448, 264883, 264566, 18108354, 264369, 264288, 264766
2916	95337790 (5831, 5832)	Novel Protein sim. GBank gil5104851dbj BA80165.1 - (AP000061) 305aa long hypothetical dTDP-4- dehydrothamnose reductase [Aeropyrum pernix]		dehydrogenase	52645156, 65274572, 22278994, 22278995, 35696286, 22278996, 22278997, 22278998, 22278999, 264259, 29331822, 29331824, 29331825, 66714117, 60432289, 29331826, 29331827, 29331828, 33656970, 264509, 264906, 29331830, 52644045, 264909, 56182435, 60170831, 264592, 264593, 33657402, 60433356, 52646317, 21906754, 33109954, 33657084, 52644296, 85658542, 265011, 265017, 265018, 265019, 18108351, 264448, 264288, 52644229, 21906765, 21906766, 21906767, 21906768, 21906769, 55811957, 35695917, 265021, 265022, 52644150, 33657023, 33657109, 33657182, 27486261, 27486262, 27486284, 35695763, 18108376, 55811576, 35696423, 65274791, 35695855, 52644332, 264557, 264638, 56182323, 18108387, 87168518, 22279002, 264482
2917	87454546 (5833, 5834)	Novel Protein sim. GBank gil3169065jemb CAA19260.1 - (AL023704) putative translocation elongation factor-Tu fa mily [Schizosaccharomyces pombe]		UNCLASSIFIED	60433438, 264602, 264682, 87168518, 60432113
2918	85690529 (5835, 5836)	Novel Protein sim. GBank gil539218 pir S38038 - hypothetical protein YKL201c - yeast (Saccharomyces cerevisiae)			264638
2919	87641487 (5837, 5838)	Novel Protein sim. GBank gil2564955 (AF030001) - unknown [Mus musculus]			66714117, 66712502, 263381

2920	87769523 (5838, 5840)				35696286, 22278997, 284259, 52645080, 29331824, 29331826, 29331827, 264828, 264909, 56182435, 264511, 264758, 33109954, 21906754, 52644296, 285010, 265011, 264601, 265017, 265019, 264681, 264687, 21906767, 265021, 52644150, 264690, 264691, 264692, 264693, 33657109, 33657182, 27486282, 27486284, 27486285, 35696423, 35695855, 264632, 264636, 264637, 264638, 56182323, 60170394, 18108385, 87168518, 60432113
2921	91639982 (5841, 5842)	Novel Protein sim. GBank gij4580013 gb AAD24202.1 U83194_ - (U83194) TRAF4-associated factor 2 (Homo sapiens)	Contains protein domain (PF00787) - PX domain		35696286, 22278997, 264091, 264092, 264094, 264259, 29331822, 29331824, 29331826, 29331827, 35696052, 29146498, 264104, 264105, 264107, 264509, 264110, 264112, 264512, 60433356, 21906754, 87168474, 265017, 18108351, 264288, 21906765, 21906766, 21906767, 21906769, 35695917, 265021, 263974, 18108374, 263976, 263977, 18108376, 264555, 263981, 56526486, 87168518, 22279000, 22279002, 264908, 264909, 264511, 265006, 265008, 264593, 33657402, 60174639, 18108351, 264763, 21906765, 29148627, 35695917, 264692, 264629, 263978, 55811576, 35695855, 264555, 264558, 56182323, 60170394, 22279000, 264486
2922	87749762 (5843, 5844)	Novel Protein sim. GBank gij4589514 dbj BAA76779.1 - (AB023152) KIAA0935 protein (Homo sapiens)	Contains protein domain (PF01074) - Glycosyl hydrolases family 38	kinase	264488, 18108397, 22278995, 22278996, 22278997, 22278998, 22278999, 29331825, 29331826, 29331827, 29331830, 264511, 265009, 33657402, 265011, 265017, 265018, 264683, 18108354, 21906765, 21906767, 21906768, 21906769, 52644150, 264691, 264692, 33657109, 263974, 18108376, 264631, 264636, 18108385, 18108387, 22279000, 264563, 264566
2923	95337789 (5845, 5846)	Novel Protein sim. GBank gij4835268 emb CAB42898.2 - (Z83844) dJ37E16.4 (similar to mouse p116Rip protein) (Homo sapiens)	Contains protein domain (PF00169) - PH domain	struct	265017, 264628, 20281152, 264556
2924	87791967 (5847, 5848)	Novel Protein sim. GBank gij2133095 pri J572254 - ribosomal protein L36, mitochondrial - yeast (Saccharomyces cerevisiae)	Contains protein domain (PF00444) - Ribosomal protein L36	ribosomal prot	
2925	95090120 (5849, 5850)	Novel Protein sim. GBank gij2388986 emb CAB11718 - (Z88980) actin associated protein (Schizosaccharomyces pombe)	UNCLASSIFIED		56182575, 35696286, 264259, 60432289, 29331827, 264508, 52644045, 264910, 264591, 60432228, 55812038, 21906754, 264681, 264448, 264683, 264288, 264685, 52644229, 264689, 21906765, 21906766, 21906768, 21906769, 265021, 265022, 60170615, 264692, 33657023, 264693, 33657109, 35696423, 65274791, 56182323

2928	85343003 (5851, 5852)	Novel Protein sim. GBank gij283032[prfj]S22456 - hydroxyproline-rich glycoprotein - perennial teosinte			29331828, 265011, 264768, 264689, 264764, 264288, 264630, 264637
2929	80408018 (5853, 5854)			UNCLASSIFIED	264559
2928	20452179 (5855, 5856)	Novel Protein sim. GBank gij3413320[emb]CAA06915] - (AJ008215) CMP-N-acetylneuraminic acid synthetase [Mus musculus]		UNCLASSIFIED	264569, 264489, 22278994, 35696286, 22278996, 22278998, 22278999, 264094, 264259, 52845080, 29331822, 29331824, 66714117, 29331825, 29331826, 29331827, 35696052, 33856970, 264109, 29331830, 52844045, 265009, 33109954, 52644296, 87168559, 264760, 264762, 264448, 264764, 264288, 264766, 264768, 21906765, 21906766, 21906768, 21906769, 35695917, 264691, 33857023, 264693, 33857109, 18108374, 263976, 35696423, 35695855, 263981, 22279000, 22279002, 264567, 264486
2930	95302755 (5859, 5860)			UNCLASSIFIED	56182575, 56181686, 35696286, 22278996, 22278998, 22278999, 264259, 29331825, 60432289, 29331828, 264905, 52644045, 56182435, 265009, 60170831, 264592, 60432229, 60433358, 87168474, 265010, 265011, 265017, 265018, 265019, 264762, 264448, 264683, 264288, 264766, 21906765, 21906769, 35695917, 60170615, 33857023, 33657109, 264628, 18108370, 18108372, 35696423, 35695855, 264556, 56182323, 60432113, 264567
2931	94312693 (5861, 5862)	Novel Protein sim. GBank gij3786433 (AF098505) - similar to Arabidopsis thaliana male sterility protein 2 (SW-Q08891) [Caenorhabditis elegans]	Contains protein domain (PF00471) - Ribosomal protein L33	UNCLASSIFIED	52645156, 22278997, 22278998, 29331822, 52645080, 29331824, 60432289, 33856970, 60433356, 60433438, 33109954, 21906765, 21906766, 21906767, 21906768, 265020, 52644150, 33857023, 33657109, 33857182, 27486265, 35696423, 35695855, 264555, 87168518, 60432113, 264566
2932	79632623 (5863, 5864)				264906, 264907
2933	91720776 (5865, 5866)	Novel Protein sim. GBank gij3378056 (AF017777) - helicase [Drosophila melanogaster]	helicase		264488, 18108392, 56182575, 22278999, 264091, 264259, 29331825, 60432289, 29331827, 264508, 52644045, 56182435, 265007, 265009, 264592, 60433356, 60433438, 21906754, 265017, 264682, 264288, 52644229, 21906765, 21906766, 21906768, 21906769, 265022, 52644150, 33657023, 33657109, 27486265, 264635, 264636, 60170394, 56182323, 18108385, 60432113, 264565, 264566, 264567

2934	86576025 (5867, 5868)				22278997, 22278999, 29331824, 33657402, 264691, 27486262, 264628, 87168518, 22279000
2935	86410578 (5869, 5870)			UNCLASSIFIED	56182575, 22278995, 60433356, 33657402, 264758, 33109954, 21908754, 265018, 265019, 264448, 264769, 21908764, 21908765, 265021, 264692, 33657023, 33657109, 33657349, 55810764, 22279000
2936	87605863 (5871, 5872)	Novel Protein sim. GBank gi4153862 (AC005065) - determined by GENSCAN prediction and spliced EST; match to EST R84329 (NID:942735) [Homo sapiens]	Contains protein domain (PF00856) - SET domain	nuclease	22278997, 29331827, 29331828, 265009, 265017, 264605, 265020, 55811576, 18108387, 60432113, 264563
2937	94853096 (5873, 5874)	Novel Protein sim. GBank gi5174409refNP_006101.1pCD2B - CD2 antigen (cytoplasmic tail)-binding protein 2.		UNCLASSIFIED	56994075, 22278999, 264259, 60432049, 29331822, 56182181, 29331827, 29331828, 264906, 264908, 264909, 56182435, 265006, 264512, 264910, 60170831, 60433356, 265011, 265018, 18108351, 264448, 264288, 264766, 52844229, 21908765, 29148784, 65274791, 264556, 56182323, 60170394, 264558, 60432113, 264565, 264486, 264567
2938	95419773 (5875, 5876)	Novel Protein sim. GBank gi3319990[embjCAA76720] - (Y17267) ubiquitin-conjugating enzyme [Mus musculus]	Contains protein domain (PF00179) - Ubiquitin-conjugating enzyme	ubiquitin	264498, 56182575, 22278996, 35898286, 22278997, 22278998, 22278999, 264490, 264259, 29331822, 29331824, 66714117, 29331827, 35696052, 264107, 264905, 66712502, 52644045, 56182435, 264511, 265008, 265009, 60432229, 33657402, 60433438, 55812038, 21908754, 85658542, 265010, 265011, 87168559, 285017, 265018, 265019, 264681, 264288, 264689, 21908765, 21908767, 21908768, 55811957, 35895917, 265020, 60170615, 264690, 264691, 264692, 33657023, 264693, 65274620, 33657109, 18108370, 18108374, 263976, 35696423, 35695855, 264555, 264556, 18108381, 56182323, 60170394, 83373044, 18108385, 55526486, 60432113, 22279002
2939	87786622 (5877, 5878)	Novel Protein sim. GBank gi3979900[embjCAA89909] - (Z75547) similar to WD domain, G-beta repeat; cDNA EST yk371b7.5 comes from this gene; cDNA EST yk312h1.5 comes from this gene; cDNA EST yk465d5.5 comes from this gene; cDNA EST yk472c4.5 comes from this gene; cDNA EST yk292i8....	Contains protein domain (PF00400) - WD domain, G-beta repeat	ATPase-associated	264907, 265018, 264681, 264685, 264686

2940	95011103 (5879, 5880)			UNCLASSIFIED	22278996, 29331822, 29331824, 66714117, 29331826, 29331828, 264905, 264908, 66712502, 29331830, 265011, 265017, 264764, 264369, 21906766, 21906767, 33657023, 33657109, 32833986, 18108374, 18108377, 264634, 83373044, 18108385, 18108387, 264566
2941	21423370 (5881, 5882)	Novel Protein sim. GBank gi 3413872 dbj BAA32300 - (AB007924) KIAA0455 protein [Homo sapiens]		UNCLASSIFIED	264557
2942	87430203 (5883, 5884)	Novel Protein sim. GBank gi 1172845 sp P46629 RB25_RABIT - RAS-RELATED PROTEIN RAB-25		glycoprotein	264910, 265010, 264768
2943	95314504 (5885, 5886)	Novel Protein sim. GBank gi 4929653 gb AAD34087.1 AF15185 - (AF151850) CGI-92 protein [Homo sapiens]		collagen	60432049, 264259, 60432289, 29331827, 29146498, 265008, 264593, 60433356, 60433438, 265010, 265011, 265017, 265018, 264683, 264766, 18108381, 65274727, 60432113, 264567
2944	95081063 (5887, 5888)	Novel Protein sim. GBank gi 4678282 emb CAB41190.1 - (AL049660) 1-acylcerol-3-phosphate acyltransferase-like protein [Arabidopsis thaliana]	Contains protein domain (PF00415) - ATPase-associated Regulator of chromosome condensation (RCC1)		56994075, 22278998, 60432049, 264259, 29331822, 29331824, 60424269, 60432289, 29331826, 29331828, 264905, 264907, 52644045, 264909, 264511, 265006, 265009, 264594, 21908754, 87168559, 264603, 265017, 265018, 18108351, 264682, 264766, 264687, 264689, 21906765, 21906766, 21906767, 21906768, 21906769, 265021, 60170615, 52644150, 264690, 264691, 33657023, 264692, 264693, 33657109, 33657182, 33657349, 18108370, 18108374, 18108377, 55811578, 35696423, 35696855, 264635, 264555, 264556, 56182323, 60170394, 264558, 264559, 83373044, 56526486, 87168518, 60432113, 22279002, 264482, 264563, 264484, 264567
2945	94233560 (5889, 5890)	Novel Protein sim. GBank gi 72863 sp P39188 ALU1_HUMAN - IIII ALU SUBFAMILY J WARNING ENTRY IIII	Contains protein domain (PF00086) - Zinc finger, C2H2 type	UNCLASSIFIED	60424179, 22278995, 22278996, 22278998, 22278999, 264259, 56182181, 29331824, 60424269, 60432289, 35696052, 264908, 265006, 60433356, 55812038, 264759, 55811386, 265018, 264681, 18108351, 264448, 264683, 264369, 264288, 264687, 56181562, 21906767, 21906768, 21906769, 35695917, 265020, 265021, 264693, 60431528, 55810784, 35696423, 35696855, 264630, 60170394, 83373044, 22279000, 264566, 264567

2946	94317315 (5891, 5892)	Novel Protein sim. GBank gjl5441952 gb AAD43195.1 AF07286 - (AF072864) peroxisomal membrane protein PMP 24 [Homo sapiens]		UNCLASSIFIED	264488, 264259, 264508, 264509, 264906, 264907, 264908, 264510, 264511, 265007, 264512, 264910, 264591, 264593, 18108351, 264764, 264288, 264684, 264769, 265021, 264692, 33657109, 264628, 264629, 18108374, 264631, 264634, 264636, 264637, 18108380, 264638, 264639, 83373044, 264565, 264566, 264486, 264567
2947	87382952 (5893, 5894)	Novel Protein sim. GBank gjl3540281 gb AAC34383.1 - (AF056116) Alt-1 related protein [Fugu rubripes]		UNCLASSIFIED	22278995, 22278996, 22278997, 22278998, 29148498, 264508, 29331830, 265007, 265008, 265009, 60432228, 21906754, 285010, 285017, 285019, 264766, 264685, 21906765, 21906766, 21906767, 21906768, 21906769, 265020, 264628, 18108370, 264629, 264630, 18108387, 60432113
2948	87626527 (5895, 5896)	Novel Protein sim. GBank gjl5666614 gb AAB5554.2 - (AF001533) mitogen-induced [Mus musculus]			52646842, 22278995, 264259, 29331824, 29331825, 29331827, 29331830, 264909, 265007, 265009, 265019, 264763, 264684, 264288, 264685, 264686, 21906767, 264691, 264692, 264693, 18108374, 55811576, 18108385, 22279002, 264563, 264567
2949	88175545 (5897, 5898)	Novel Protein sim. GBank gjl2132923 pir [S67133 - probable membrane protein YOR240w - yeast (Saccharomyces cerevisiae)]		UNCLASSIFIED	22278996, 22278997, 60432228, 29331826, 29331827, 29331828, 35696052, 29146499, 264104, 264107, 264905, 66712502, 264908, 60433356, 60433438, 87168559, 264764, 52644229, 56181562, 21906767, 21906768, 21906769, 265022, 60170615, 33657023, 35696423, 263981, 264558, 60432113, 22279002
2950	95086870 (5899, 5900)	Novel Protein sim. GBank gjl466102 sp P34629 YOJ6_CAEEL - PUTATIVE AMINOPEPTIDASE ZK353.8 IN CHROMOSOME III	Contains protein domain (PF00883) - Cytosol aminopeptidase family	peptidase	264488, 35696286, 264259, 35696052, 264907, 265007, 264910, 265017, 265018, 264288, 264768, 35695917, 265020, 18108362, 18108370, 18108379, 35696423, 65274781, 35695855, 264556, 56526486, 264486
2951	87392357 (5901, 5902)	Novel Protein sim. GBank gjl4688902 emb CAB41450.1 - (AJ238248) centaurin beta2 [Homo sapiens]			264693

2952	95329952 (5903, 5904)	Novel Protein sim. GBank gl 5596693 emb CA851405.1 - (AL096881) hypothetical protein [Homo sapiens]	Contains protein domain (PF00650) - CRAU/TRIO domain.	transcript factor	264887, 52645156, 21906766, 21906769, 22278996, 265020, 264890, 60432049, 264259, 264693, 29331822, 18108365, 29331825, 60432289, 33657109, 18108368, 29331827, 35696052, 27486262, 264508, 264905, 20281149, 264906, 264907, 29331830, 264908, 264909, 35695855, 264511, 265008, 265009, 264910, 264635, 264636, 60432229, 264638, 60433356, 264639, 264758, 87168518, 265017, 22279000, 22279002, 264760, 264563, 264482, 18108351, 264448, 264288, 18108396, 56984075, 22278996, 29331822, 29331824, 29331825, 29331827, 35696052, 264508, 264905, 264906, 264907, 264510, 264591, 264594, 33657402, 264595, 264596, 264758, 52646317, 21906754, 33657084, 52644296, 87168559, 264600, 264760, 264681, 18108351, 264764, 264369, 264288, 264687, 21906765, 21906766, 21906787, 21906768, 21906769, 35695917, 33657023, 18108384, 52645129, 33657109, 33657349, 18108374, 263978, 35695855, 264637, 264638, 87168518, 264482, 264563, 264565, 29331822
2953	88093575 (5905, 5906)	Novel Protein sim. GBank gl 119522 sp P10658 SERC_RABIT - PROBABLE PHOSPHOSERINE AMINOTRANSFERASE (PSAT) (ENDOMETRIAL PROGESTERONE-INDUCED PROTEIN) (EPIP)	Contains protein domain (PF00266) - Aminotransferases class-V	UNCLASSIFIED	264482, 18108351, 264448, 264288, 18108396, 56984075, 22278996, 29331822, 29331824, 29331825, 29331827, 35696052, 264508, 264905, 264906, 264907, 264510, 264591, 264594, 33657402, 264595, 264596, 264758, 52646317, 21906754, 33657084, 52644296, 87168559, 264600, 264760, 264681, 18108351, 264764, 264369, 264288, 264687, 21906765, 21906766, 21906787, 21906768, 21906769, 35695917, 33657023, 18108384, 52645129, 33657109, 33657349, 18108374, 263978, 35695855, 264637, 264638, 87168518, 264482, 264563, 264565, 29331822
2954	88086288 (5907, 5908)	Novel Protein sim. GBank gl 4885261 ref NP_005251.1 pGDF9 - growth differentiation factor 9	Contains protein domain (PF00019) - Transforming growth factor beta like domain	Ig	264482, 18108351, 264448, 264288, 18108396, 56984075, 22278996, 29331822, 29331824, 29331825, 29331827, 35696052, 264508, 264905, 264906, 264907, 264510, 264591, 264594, 33657402, 264595, 264596, 264758, 52646317, 21906754, 33657084, 52644296, 87168559, 264600, 264760, 264681, 18108351, 264764, 264369, 264288, 264687, 21906765, 21906766, 21906787, 21906768, 21906769, 35695917, 33657023, 18108384, 52645129, 33657109, 33657349, 18108374, 263978, 35695855, 264637, 264638, 87168518, 264482, 264563, 264565, 29331822
2955	87698426 (5909, 5910)	Novel Protein sim. GBank gl 3452473 (AF084205) - serine/threonine protein kinase TAO1 [Rattus norvegicus]	Contains protein domain (PF00069) - Eukaryotic protein kinase domain	kinase	264482, 18108351, 264448, 264288, 18108396, 56984075, 22278996, 29331822, 29331824, 29331825, 29331827, 35696052, 264508, 264905, 264906, 264907, 264510, 264591, 264594, 33657402, 264595, 264596, 264758, 52646317, 21906754, 33657084, 52644296, 87168559, 264600, 264760, 264681, 18108351, 264764, 264369, 264288, 264687, 21906765, 21906766, 21906787, 21906768, 21906769, 35695917, 33657023, 18108384, 52645129, 33657109, 33657349, 18108374, 263978, 35695855, 264637, 264638, 87168518, 264482, 264563, 264565, 29331822
2956	85789745 (5911, 5912)	Novel Protein sim. GBank gl 4689254 gb AAD27830.1 AF12185 - (AF12185) sorting nexin 7 [Homo sapiens]	Contains protein domain (PF00787) - PX domain		264482, 18108351, 264448, 264288, 18108396, 56984075, 22278996, 29331822, 29331824, 29331825, 29331827, 35696052, 264508, 264905, 264906, 264907, 264510, 264591, 264594, 33657402, 264595, 264596, 264758, 52646317, 21906754, 33657084, 52644296, 87168559, 264600, 264760, 264681, 18108351, 264764, 264369, 264288, 264687, 21906765, 21906766, 21906787, 21906768, 21906769, 35695917, 33657023, 18108384, 52645129, 33657109, 33657349, 18108374, 263978, 35695855, 264637, 264638, 87168518, 264482, 264563, 264565, 29331822
2957	90933301 (5913, 5914)	Novel Protein sim. GBank gl 4503023 ref NP_000008.1 pCPT2 - carnitine palmitoyltransferase II precursor		cadherin	264482, 18108351, 264448, 264288, 18108396, 56984075, 22278996, 29331822, 29331824, 29331825, 29331827, 35696052, 264508, 264905, 264906, 264907, 264510, 264591, 264594, 33657402, 264595, 264596, 264758, 52646317, 21906754, 33657084, 52644296, 87168559, 264600, 264760, 264681, 18108351, 264764, 264369, 264288, 264687, 21906765, 21906766, 21906787, 21906768, 21906769, 35695917, 33657023, 18108384, 52645129, 33657109, 33657349, 18108374, 263978, 35695855, 264637, 264638, 87168518, 264482, 264563, 264565, 29331822
2958	87440014 (5915, 5916)	Novel Protein sim. GBank gl 4240257 dbj BAA74907.1 - (AB020691) KIAA0884 protein [Homo sapiens]			264482, 18108351, 264448, 264288, 18108396, 56984075, 22278996, 29331822, 29331824, 29331825, 29331827, 35696052, 264508, 264905, 264906, 264907, 264510, 264591, 264594, 33657402, 264595, 264596, 264758, 52646317, 21906754, 33657084, 52644296, 87168559, 264600, 264760, 264681, 18108351, 264764, 264369, 264288, 264687, 21906765, 21906766, 21906787, 21906768, 21906769, 35695917, 33657023, 18108384, 52645129, 33657109, 33657349, 18108374, 263978, 35695855, 264637, 264638, 87168518, 264482, 264563, 264565, 29331822

2959	95109420 (5917, 5918)	Novel Protein sim. GBank gi1988221 (U33005) - Tbc1 [Mus musculus]	Contains protein domain (PF00566) - oncogene TBC domain	263994, 22278997, 264259, 60432049, 29331826, 29331828, 35696052, 29331830, 66712502, 56182435, 265008, 264512, 265008, 265009, 60433356, 60433438, 264596, 265017, 265018, 264683, 264288, 264766, 264769, 21906766, 21906767, 21906769, 265020, 60170615, 264692, 27486265, 18108374, 65274791, 35695855, 83373044, 56526486, 60432113
2960	67420091 (5919, 5920)		UNCLASSIFIED	3669286, 56182435, 87168474, 265010, 60170615, 35696423, 56182323, 18108363, 87168518, 264483
2961	95413416 (5921, 5922)	Novel Protein sim. GBank gi15596646 (emb) (CA805177.2) - (Z82266) predicted using GeneFinder; similar to WD domain, G-beta repeats [Caenorhabditis elegans]	Contains protein domain (PF00400) - transcript factor WD domain, G-beta repeat	22278997, 22278999, 264259, 29331822, 29331824, 29331826, 29331828, 264907, 264908, 52844045, 265006, 33657402, 21906754, 87168474, 265011, 87168559, 265017, 21906769, 265020, 60170615, 264692, 33657023, 35695763, 18108370, 18108374, 35696423, 264632, 264636, 18108385, 87168518, 22279002, 264564, 264567
2962	87912700 (5923, 5924)		UNCLASSIFIED	35696286, 22278997, 264092, 264094, 264259, 29331824, 66714117, 29331825, 60432289, 29331826, 29331827, 29331828, 35696052, 264508, 264905, 264509, 264907, 264908, 264909, 264510, 264512, 264593, 264594, 60433438, 264758, 52646317, 264602, 264603, 264605, 264760, 264762, 264764, 264288, 264766, 264686, 264768, 264769, 35695917, 265020, 264691, 264634, 264636, 264637, 264638, 264639, 18108385, 264563, 264565, 264566, 264567, 264486
2963	95313464 (5925, 5926)	Novel Protein sim. GBank gi4240223 (dbj) BAA74890.1 - (AB020674) KIAA0867 protein [Homo sapiens]	Contains protein domain (PF00010) - Helix-loop-helix DNA-binding domain	18108392, 56994075, 22278998, 22278999, 29331822, 29331825, 29331826, 29331827, 29331828, 265007, 265008, 264592, 264594, 21906754, 265018, 264760, 264687, 29148627, 29148784, 265020, 33657023, 264693, 65274620, 33657182, 27486261, 264629, 55810764, 35696423, 264555, 264636, 264637, 264557, 264558, 264563
2964	94324617 (5927, 5928)		UNCLASSIFIED	264259, 29331828, 33657402, 265017, 265018, 264692, 18108368, 35696423, 83373044, 18108388

2865	80384762 (5829, 5930)	Novel Protein sim. GBank gij4885447[re]NP_005452.1[pkRML - Kreisler (mouse) mal- related leucine zipper homolog			transcriptfactor	264259, 29331826, 264508, 264509, 264805, 264907, 264908, 264909, 264511, 265008, 264910, 264591, 264593, 264594, 33657402, 265011, 264760, 264762, 264764, 264288, 264685, 264766, 264692, 33657109, 264628, 264629, 35895855, 264630, 264631, 264632, 264634, 264635, 264636, 264637, 264638, 264639, 264563, 264567, 18108391 60432289, 264682, 264448
2866	91725248 (5931, 5932)	Novel Protein sim. GBank gij5262751[emb]CAB45690.11 - (AJ243177) Xenopus RPA interacting protein alpha [Xenopus laevis]				
2867	94658303 (5933, 5934)	Novel Protein sim. GBank gij824225 (U19181) - Rabin3 [Rattus norvegicus]			UNCLASSIFIED	264488, 264508, 264509, 264908, 264909, 264511, 264910, 264594, 264758, 85658542, 264762, 264764, 265021, 264556, 18108381, 264564, 264486
2868	95302776 (5935, 5936)	Novel Protein sim. GBank gij4929715[gb]AAD34118.1[AF15188 - (AF151881) CGI-123 protein [Homo sapiens]	Contains protein domain (PF00097) - Zinc finger, C3HC4 type (RING finger)			264687, 52645156, 21806765, 52646365, 21906767, 18108398, 35696423, 22278996, 3586286, 22278997, 265020, 22278999, 265021, 265022, 264093, 264636, 264690, 52644150, 264259, 33657023, 52645080, 264693, 29331822, 56182181, 29331824, 66714117, 29331825, 33109954, 52645129, 29331826, 21906754, 33657182, 29331827, 29331828, 35696052, 27486262, 87168518, 87168474, 265010, 87168559, 265018, 22278000, 265019, 22279002, 264563, 18108351, 264906, 264807, 264448, 66712502, 264568, 264359, 264288
2869	95310957 (5937, 5938)	Novel Protein sim. GBank gij3024743[sp]O24734[THSA_SULS7 - THERMOSOME, ALPHA SUBUNIT (CHAPERONIN ALPHA SUBUNIT)]		eph		52646842, 22278996, 22278998, 22278999, 60432049, 264259, 29331824, 29331825, 29331826, 29331828, 264509, 264909, 52644045, 56182435, 265009, 60433438, 55812038, 21906754, 265011, 87168559, 265018, 265019, 264448, 264288, 264369, 52644229, 21906766, 21906768, 21906769, 29148784, 265020, 265021, 52644150, 284691, 33657109, 18108374, 56182323, 60170394, 87168518, 60432113, 22279000
2870	88088071 (5939, 5940)	Novel Protein sim. GBank gij3155407 (AC004755) - [os37502_1 [Homo sapiens]	Contains protein domain (PF00046) - Homeobox domain	homeobox		

2971	94196930 (5941, 5942)	Novel Protein sim. GBank gij728637spjP39194IALU7_HUMAN - IIII ALU SUBFAMILY SQ WARNING ENTRY IIII		lm7	264488, 56182575, 35696286, 56994075, 29331824, 29331826, 29146499, 264508, 264905, 264907, 264112, 264910, 21908754, 87168559, 265018, 285019, 18108351, 264689, 21908765, 21906767, 21906768, 265020, 265021, 60170615, 18108364, 264628, 264629, 18108374, 264636, 264556, 264558, 83373044, 18108384, 18108385, 87168518, 264564, 264567
2972	86825943 (5943, 5944)	Novel Protein sim. GBank gij728637spjP39194IALU6_HUMAN - IIII ALU SUBFAMILY SP WARNING ENTRY IIII		kinase	265017, 35695917, 265021, 33657109, 22279002, 264563
2973	91215301 (5945, 5946)	Novel Protein sim. GBank gij2746789 (AF040842) - No definition line found [Caenorhabditis elegans]		UNCLASSIFIED	29331822, 264692, 33657349, 55811576, 264563
2974	91673002 (5947, 5948)	Novel Protein sim. GBank gij786117 (L41834) - nuclear protein [Ensis minor]		UNCLASSIFIED	18108392, 52644507, 56182575, 56181686, 22278995, 22278996, 35696286, 22278997, 22278998, 22278999, 264259, 52845080, 29331824, 29331825, 66714117, 60424269, 29331826, 29331827, 29331828, 35696052, 66712502, 264908, 52644045, 265007, 264910, 265009, 60433438, 33109954, 21908754, 55811386, 52644296, 87168474, 87168559, 265017, 265018, 265019, 18108351, 264448, 264369, 264288, 52644229, 18108359, 21908765, 21908767, 21908768, 35695917, 265020, 265021, 52644150, 264691, 264692, 33657023, 27486262, 27486264, 35695763, 18108370, 18108376, 55810764, 55811578, 35696423, 35695855, 264630, 264635, 264557, 52644332, 264558, 83373044, 18108387, 87168518, 60432113, 22279000, 264482, 264487
2975	95325213 (5949, 5950)	Novel Protein sim. GBank gij3880812lemb(CAA19508) - (AL023833) similar to HECT-domain (ubiquitin-transferase); cDNA EST yk480d10.5 comes from this gene [Caenorhabditis elegans]	Contains protein domain (PF00632) - HECT-domain (ubiquitin- transferase).	ubiquitin	29331824, 29331827, 29331828, 264910, 85858542, 265011, 265018, 264448, 264288, 264769, 21908767, 265020, 264691, 264559, 83373044
2976	87771202 (5951, 5952)	Novel Protein sim. GBank gij5679138jbbAAD46874.1(AF160934) BcDNA.LD14189 [Drosophila melanogaster]		transport	22278996, 264906, 265007, 265010, 265011, 265017, 265019, 18108351, 264685, 264689, 18108370, 264639, 18108385
2977	91725254 (5953, 5954)	Novel Protein sim. GBank gij5262751lemb(CAB45690.1) - (AJ243177) Xenopus RPA interacting protein alpha [Xenopus laevis]		UNCLASSIFIED	264509, 264288

2978	87332059 (5955, 5956)	Novel Protein sim. GBank gij746549 (U23522) - No definition line found [Caenorhabditis elegans]	Contains protein domain (PF00480) - ROK family	UNCLASSIFIED	22278995, 22278996, 22278997, 22278999, 264259, 60432289, 29331827, 29146499, 56182435, 265006, 265007, 265009, 60433356, 60433438, 21906754, 265010, 265011, 265017, 265018, 265019, 264288, 264685, 264688, 21906765, 21906766, 21906767, 21906768, 21906769, 265020, 265021, 265022, 35696423, 264639, 60432113, 22279000, 22279002
2979	91725256 (5957, 5958)	Novel Protein sim. GBank gij526275 [emb]CAB45690.1] - (AJ243177) Xenopus RPA interacting protein alpha [Xenopus laevis]	complement		264488, 65274572, 56994075, 22278999, 264093, 29331822, 29331824, 264288, 55811957, 33657023, 33657109, 18108370, 55811576, 56182323, 60432113, 264482
2980	86286600 (5959, 5960)				265009, 21906767, 263981, 22279000
2981	87376330 (5961, 5962)			UNCLASSIFIED	264629, 264564
2982	93303675 (5963, 5964)	Novel Protein sim. GBank gij4929767 [gb]AAD34144.1 [AF15190] - (AF151907) CGI-149 protein [Homo sapiens]			22278995, 56994075, 22278996, 22278997, 22278998, 22278999, 264092, 29331824, 29331827, 29331828, 264905, 264591, 284592, 264594, 264595, 264596, 33657084, 264448, 21906765, 21906766, 21906767, 21906768, 21906769, 265020, 265022, 18108365, 33657182, 33657349, 35696423, 83373044, 22279000, 22279002
2983	91725258 (5965, 5966)	Novel Protein sim. GBank gij526275 [emb]CAB45690.1] - (AJ243177) Xenopus RPA interacting protein alpha [Xenopus laevis]			60424178, 52646842, 18108398, 22278997, 264093, 60432049, 264259, 29331822, 60432289, 33656970, 264905, 52644045, 265006, 60431735, 87168474, 265018, 265019, 18108351, 264448, 21906765, 21906768, 35695917, 33657023, 52645129, 18108370, 35696423, 83373044, 56526486, 60432113, 264404, 22279002
2984	94136467 (5967, 5968)	Novel Protein sim. GBank gij2393734 (AC002542) - similar to C. elegans F11A10.5; 80% similarity to Z68297 (PID:g1130619) [Homo sapiens]	ATPase associated		
2985	87099072 (5969, 5970)	Novel Protein sim. GBank gij103160 [pir] [S22126 - finger protein untempl - fruit fly (Drosophila melanogaster)]		UNCLASSIFIED	264910, 55812038, 56181562, 55811957, 264628, 55810764, 264632, 264635, 60432113
2986	86284861 (5971, 5972)				55811957, 264566
2987	86455934 (5973, 5974)			UNCLASSIFIED	264369

2888	93357753 (5975, 5976)	Novel Protein sim. GBank gij4679028[gb AAD27002.1] - (AF077207) HSPC021 [Homo sapiens]	UNCLASSIFIED	264488, 65274572, 22278995, 22278996, 22278997, 22278999, 264092, 264094, 264259, 60432049, 29331824, 29331826, 60432289, 35696052, 29331828, 264107, 264905, 264907, 264908, 66712502, 264828, 264909, 56182435, 265006, 265007, 265008, 60170831, 60432229, 264593, 60433356, 264757, 60433438, 21906754, 265010, 265011, 87168559, 265017, 265018, 264682, 264448, 264369, 264288, 264685, 52644229, 21906765, 21906767, 21906769, 35695917, 265021, 265022, 52644150, 264690, 33657023, 65274620, 263967, 33657109, 27486262, 18108370, 18108372, 18108374, 55810764, 65274791, 35695855, 264635, 264636, 264637, 263981, 264638, 56182323, 83373044, 60432113, 22279000, 264563, 264564, 264565, 264566, 264567, 22278996, 22278997, 264905, 264511, 60170831, 264583, 265019, 21906765, 21906767, 21906768, 18108374
2889	91225118 (5977, 5978)	Novel Protein sim. GBank gij113671[sp P23964 ALUF_HUMAN - III] ALU CLASS F WARNING ENTRY IIII	kinase	265007, 264512, 18108351, 264288, 264689, 265020, 264691, 33657023, 33657109
2890	87330444 (5979, 5980)	Novel Protein sim. GBank gij2829836[sp P97348 RHOD_MOUSE - RHO-RELATED GTP-BINDING PROTEIN RHOD	oncogene	264563
2891	94325361 (5981, 5982)		UNCLASSIFIED	264259, 265019, 264689, 18108385
2892	85425164 (5983, 5984)		UNCLASSIFIED	264488, 29331822, 265017, 264761, 21906769, 65274791, 263981, 264565
2893	94325363 (5985, 5986)		UNCLASSIFIED	22278994, 22278995, 56994075, 22278997, 22278999, 264259, 29331822, 29331824, 29331825, 29331826, 29331827, 29331828, 265006, 265009, 264910, 33109954, 87168474, 87168559, 265018, 265019, 264448, 264288, 21906766, 21906767, 21906768, 21906769, 265021, 265022, 33657023, 264693, 35695855, 83373044, 18108385, 22279000, 264565, 264566, 264905, 264907, 265019, 18108351, 264683
2894	94136634 (5987, 5988)	Novel Protein sim. GBank gij2496549[sp Q50658 YU02_MYCTU - HYPOTHETICAL 29.7 KD PROTEIN CY339.02	transport	65274572, 35696288, 264259, 29331824, 35696052, 29146499, 264508, 264907, 265007, 265008, 60433438, 18108348, 265017, 264681, 264683, 264288, 264766, 264769, 264689, 35695917, 60170615, 33657023, 264692, 264634, 264555, 18108381, 18108382, 18108388, 264484
2895	87591070 (5989, 5990)	Novel Protein sim. GBank gij2734081 (AF000195) - similar to oxysterol-binding proteins [Caenorhabditis elegans]		
2896	91013798 (5991, 5992)	Novel Protein sim. GBank gij2829912 (AC002291) - Similar ATP-dependent RNA Helicase [Arabidopsis thaliana]	helicase	

2997	87627440 (5993, 5994)	Novel Protein sim. GBank gll4589652[dbj]BAA76848.1] - (AB023221) KIAA1004 protein [Homo sapiens]		homeobox	264488, 56182575, 264259, 66714117, 29331826, 35690052, 264508, 264509, 264907, 264908, 265008, 87168474, 265019, 264448, 264582, 264685, 264766, 21906764, 21906766, 21906768, 21906769, 27486261, 18108374, 35696423, 264634, 264635, 264638, 264557, 18108385, 87166518
2998	86095381 (5995, 5996)	Novel Protein sim. GBank gll3947589[emb]CAA22252] - (AL034364) cDNA EST yk255b9.3 comes from this gene; cDNA EST yk255b9.5 comes from this gene; cDNA EST EMBL:M75923 comes from this gene [Caenorhabditis elegans]		UNCLASSIFIED	52646365, 22278997, 264508, 264908, 18108351, 21908785, 21906767, 18108370, 18108374, 35696423, 264636, 264639
2999	94847055 (5997, 5998)	Novel Protein sim. GBank gll115408[sp]P18835[CC19_CAEEL - CUTICLE COLLAGEN 19		UNCLASSIFIED	56182575, 22278996, 29147620, 29331825, 29146498, 29146499, 264905, 66712502, 265006, 265009, 21906754, 85858542, 18108351, 29148627, 29148629, 60170615, 33657109, 27486262, 18108370, 18108374, 264556, 264557, 264558, 60170394, 18108385, 264563
3000	95099370 (5999, 6000)	Novel Protein sim. GBank gll1163174 (U32575) - similar to yeast SecE, Swiss-Prot Accession Number P32844; similar to mammalian B94, Swiss-Prot Accession Number Q03169; Method: conceptual translation supplied by author [Rattus norvegicus]		UNCLASSIFIED	264887, 22278997, 22278999, 264259, 29331822, 29331824, 35696052, 29146498, 264508, 264905, 264906, 264907, 264908, 264909, 264510, 264511, 265006, 285007, 265008, 265009, 264910, 33657402, 264757, 264595, 264596, 264758, 21906754, 265011, 264600, 265017, 265018, 264605, 265019, 264760, 264761, 264762, 264681, 264682, 264764, 264288, 264685, 264766, 264686, 264768, 264769, 21906765, 21906768, 35695917, 265020, 264691, 264692, 33657023, 264693, 33657109, 33657182, 27486261, 264628, 264629, 18108374, 18108376, 35696423, 35695855, 264630, 264631, 264632, 264634, 264635, 264636, 264637, 264556, 264638, 264639, 60170394, 83373044, 20798451, 22279002, 264563, 264486, 264567
3001	86078454 (6001, 6002)	Novel Protein sim. GBank gll2078470 (AC002073) - Putative gene. Genscan predictions confirmed by EST splicing; : coded for by human cDNAs AA122029 (NID:g1678048), D31562 (NID:g644442), AA158721 (NID:g1733515), R58640 (NID:g830335) and F13082 (NID:g709111) [Homo sapiens]		calhepsin	18108394, 52646842, 56182575, 29331824, 29331825, 29331827, 264910, 33109954, 52644296, 265017, 265019, 264288, 265020, 265021, 52644150, 264692, 35695763, 55810764, 35696423, 56182323, 18108387, 264563, 264564
3002	87718167 (6003, 6004)	Novel Protein sim. GBank gll3599478 (AF085185) - Myosin-IA [Acanthamoeba castellanii]		UNCLASSIFIED	264488, 29331824, 29331825, 29331826, 29331827, 29331828, 264908, 264510, 265009, 21906754, 264682, 264688, 33657023, 264565

3003	86848078 (6005, 6008)	Novel Protein sim. GBank gi11754869 (U30292) - collagen type XIII alpha-1 chain [Mus musculus]	Contains protein domain (PF01391) - collagen Collagen triple helix repeat (20 copies)	264512, 264593, 264564, 264567, 264486
3004	88066876 (6007, 6008)	Novel Protein sim. GBank gi2224629(dbj)BAA208021 - (AB002342) KIAA0344 [Homo sapiens]		29331830, 21906769, 264691, 33657109, 263972, 18108385
3005	87794843 (6008, 6010)	Novel Protein sim. GBank gi14680659(gb)AAD27719.1(AAF13294 - (AF132944) CGI-10 protein [Homo sapiens]	Contains protein domain (PF01360) - oxygenase Monoxygenase	29331822, 29331824, 29331827, 60433436, 265011, 265019, 21906766, 21906767, 21906768, 265020, 33657023, 33657349, 60170394, 22279002, 264567
3006	87422224 (6011, 6012)	Novel Protein sim. GBank gi3930525 (AF064447) - sex-determination protein homolog Fem1a [Mus musculus]	Contains protein domain (PF00023) - MHC Ank repeat	264259, 29331822, 264512, 21906754, 265018, 264687, 21906765, 264691, 264555, 264556, 264558, 18108385
3007	90936005 (6013, 6014)	Novel Protein sim. GBank gi2565052 (U80738) - CAGH1a [Homo sapiens]	Contains protein domain (PF00096) - transcript factor Zinc finger, C2H2 type	52644507, 52645156, 65274572, 264909, 264512, 265018, 264760, 264448, 264765, 264689, 60170815, 18108374, 20281152, 264636, 52644332
3008	80416249 (6015, 6016)	Novel Protein sim. GBank gi3127193 (AF062389) - kidney-specific protein [Rattus norvegicus]	Contains protein domain (PF00501) - synthase AMP-binding enzyme	264905, 264593, 264766, 264636, 52646842, 56182575, 22278995, 22278996, 264259, 29331825, 29331826, 29331827, 29331828, 35696032, 264508, 264509, 264907, 56182435, 264511, 265007, 264512, 265008, 264757, 264758, 55812038, 264759, 33109954, 21906754, 265010, 265011, 264600, 265017, 265018, 265019, 264760, 18108351, 264288, 264369, 21906764, 21906765, 21906767, 55811957, 265020, 265021, 264691, 18108388, 27486762, 20281149, 18108370, 55811576, 264637, 264556, 264557, 18108381, 264558, 56182323, 264559, 18108385, 18108388, 22279002, 264486
3010	95317217 (6018, 6020)	Novel Protein sim. GBank gi14927370(gb)AAD33084.1(AF06797 - (AF067972) DNA cytosine methyltransferase 3 alpha [Homo sapiens]	Contains protein domain (PF01923) - UNCLASSIFIED Protein of unknown function	264686, 264687, 21906767, 21906769, 55811957, 22278995, 35695917, 22278996, 22278997, 265020, 265021, 60170615, 264692, 33657023, 29331822, 264693, 18108384, 29331824, 33657109, 60432289, 29331827, 27486261, 29331828, 264508, 264909, 55811576, 35695855, 265008, 264556, 60433438, 83373044, 18108387, 65274727, 60432113, 265017, 22279000, 265019, 264564, 264682, 264764
3011	94323597 (6021, 6022)	Novel Protein sim. GBank gi15052319(gb)AAD38501.1(AF11883 - (AF118838) citrin; adult-onset type II citrullinemia protein [Homo sapiens]	Contains protein domain (PF00153) - transport Mitochondrial carrier proteins	35696052, 56182435, 264758, 21906754, 265018, 264760, 264762, 18108351, 264682, 264448, 21906766, 65274620, 18108374, 264482, 264564
3012	87753087 (6023, 6024)		UNCLASSIFIED	263972

3013	81236799 (6025, 6026)	Novel Protein sim. GBank glij3702286 (AC005787) - R33374_1 (Homo sapiens)	Contains protein domain (PF00400) - WD domain, G-beta repeat	transcriptfactor	264488, 263994, 35696286, 22278997, 264259, 29331824, 60424269, 66714117, 35696052, 264905, 264906, 264907, 264908, 264909, 56182435, 264511, 264512, 264910, 264591, 264592, 264593, 264594, 33657402, 60433438, 264595, 264596, 55812038, 264758, 33109954, 21906754, 265010, 265018, 264604, 264760, 264682, 264683, 264764, 264369, 264288, 264765, 264766, 264686, 264788, 264687, 21906767, 35695917, 265020, 33657023, 264692, 264693, 33657109, 264628, 264629, 55811578, 35696423, 35695855, 264630, 264631, 264632, 264634, 264635, 264636, 264637, 264638, 264639, 83373044, 264563, 264565, 264566, 264567
3014	79877263 (6027, 6028)	Novel Protein sim. GBank glij3878374 (emb CAA93081 - (Z68879) Similarity to Yeast Chl12p protein (PIR Acc. No. S54453); cDNA EST EMBL:D27950 comes from this gene; cDNA EST EMBL:D27949 comes from this gene; cDNA EST EMBL:D33447 comes from this gene; cDNA EST EMBL:D33318 comes from...		ATPase_associated	284760
3015	86895466 (6029, 6030)				22278995, 22278996, 22278997, 264259, 29331824, 29331828, 264908, 265007, 265008, 264910, 265011, 265017, 265019, 264891, 33657109, 18108370, 35695855, 264556, 264564
3016	87759945 (6031, 6032)	Novel Protein sim. GBank glij168819 (sp P41733 CC91_YEAST - CELL DIVISION CONTROL PROTEIN 91		UNCLASSIFIED	52644507, 52646842, 56994075, 52645080, 29331822, 29331824, 35696052, 33655870, 52644045, 264596, 33657084, 265017, 265019, 52644229, 21906767, 35695917, 52644150, 33657023, 33657109, 27486261, 27486262, 27486264, 33657349, 27486265, 35695763, 35695855, 87168518
3017	85011154 (6033, 6034)	Novel Protein sim. GBank glij4589658 (dbj BAAT6851.1 - (AB023224) KIAA1007 protein [Homo sapiens]			264488, 18108397, 22278996, 35696286, 22278999, 264259, 29331822, 60432289, 264908, 29331830, 264909, 56182435, 265006, 265007, 265008, 265009, 264591, 60433356, 60433438, 52646317, 21906754, 55811386, 265010, 265011, 87168559, 265017, 265018, 265019, 264288, 264687, 21906765, 21906766, 21906767, 21906769, 265020, 265022, 65274620, 52645129, 33657109, 33657182, 18108370, 263972, 18108374, 264631, 52644332, 83373044, 18108385, 18108388, 56526486, 87168518, 264404, 60432113, 22279000, 264567

3018	11073881 (6035, 6036)	Novel Protein sim. GBank gij3219332 (AC004020) - Unknown gene product (Homo sapiens)		oncogene	264558 264569, 52644507, 18108394, 65274572, 56182575, 22278994, 22278995, 56994075, 22278998, 22278999, 264259, 29331822, 29331824, 60432289, 29331827, 264908, 56182435, 265007, 265009, 60432229, 264593, 60433356, 55812038, 21906754, 87168474, 265011, 87168559, 265017, 265018, 265019, 264681, 18108351, 264448, 264682, 264683, 18108354, 264685, 264687, 264688, 21906766, 21906768, 21906769, 52644150, 264690, 264691, 33657023, 264692, 264693, 33657109, 52645129, 33657349, 264629, 65274791, 264634, 52644332, 56182323, 18108385, 87168518, 22279000, 22279002, 264563
3019	94148231 (6037, 6038)				
3020	94318251 (6039, 6040)	Novel Protein sim. GBank gij3414809 (AF061529) - rjs [Mus musculus]	Contains protein domain (PF00415) - Regulator of chromosome condensation (RCC1)	ATPase-associated	264488, 263994, 35696286, 264259, 264508, 264905, 264509, 264906, 264907, 264908, 264909, 264510, 264910, 60174639, 264600, 264603, 264760, 264762, 264682, 264763, 264764, 264288, 264369, 264766, 264687, 264688, 264769, 55811957, 35695917, 33657023, 264628, 35696423, 35695855, 264630, 264632, 264634, 264635, 264636, 264637, 264556, 264557, 264638, 264639, 83373044, 18108385, 264564, 264567, 264486
3021	80478512 (6041, 6042)	Novel Protein sim. GBank gij3880889[emb] (CAB09005) - (Z95559) cDNA EST yk236d4.5 comes from this gene; cDNA EST EMBL.C13455 comes from this gene; cDNA EST yk329g6.5 comes from this gene; cDNA EST CEMSH45R comes from this gene [Caenorhabditis elegans]			264769, 264629, 264482
3022	87718500 (6043, 6044)			UNCLASSIFIED	264259, 29331826, 29331828, 264288, 264566
3023	95305484 (6045, 6046)	Novel Protein sim. GBank gij416592[sp]P32323JAGA1_YEAST - A-AGGLUTININ ATTACHMENT SUBUNIT PRECURSOR	Contains protein domain (PF00614) - Phospholipase D. Active site motif	UNCLASSIFIED	264488, 22278995, 35696286, 22278997, 29331826, 35696052, 264907, 29331830, 52644045, 56182435, 60432229, 264592, 60433356, 60433438, 264689, 21906767, 55811957, 35695917, 265021, 18108376, 263978, 264635, 264558, 22279000
3024	86675305 (6047, 6048)			UNCLASSIFIED	60432049, 264760, 21906769, 55811957, 35695917, 264690, 264555, 264559
3025	65706629 (6049, 6050)	Novel Protein sim. GBank gij295671 (L11275) - selected as a weak suppressor of a mutant of the subunit AC40 of DNA dependant RNA polymerase I and III [Saccharomyces cerevisiae]			264593, 55811576

3026	87643662 (6051, 6052)	Novel Protein sim. GBank gi 3024052 sp P97824 KARI_RAT1 - KALIRIN (PAM COOH-TERMINAL INTERACTOR PROTEIN 10) (P-CIP10)		UNCLASSIFIED	22278996, 22278997, 264490, 29331825, 264111, 265007, 60170831, 265010, 87168559, 265019, 21906765, 29148627, 263967, 20281149, 20281069, 263975, 263977, 20281071, 56526486, 22279000
3027	94844563 (6053, 6054)	Novel Protein sim. GBank gi 4929847 gb AAD34084.1 AF15184 - (AF151847) CGI-89 protein [Homo sapiens]	Contains protein domain (PF01529) - DHHC zinc finger domain	UNCLASSIFIED	18108394, 22278995, 22278996, 35696286, 22278997, 22278998, 60432049, 264259, 29331822, 29331824, 66714117, 29331825, 60432289, 29331826, 29331827, 29331828, 35696052, 264905, 264907, 29331830, 264908, 264909, 264510, 265007, 265008, 265009, 264910, 33657402, 264596, 21906754, 265010, 265011, 87168559, 264600, 265018, 18108351, 264682, 264683, 264764, 264288, 264685, 264687, 264769, 264689, 21906765, 21906766, 21906767, 21906768, 21906769, 29148629, 35695917, 265020, 265021, 265022, 52644150, 264692, 33657023, 264693, 52645129, 33657109, 27486281, 18108374, 55811576, 35696423, 65274791, 264636, 264556, 264557, 264638, 60170394, 264639, 264558, 83373044, 18108385, 56526486, 22279000, 22279002
3028	94231897 (6055, 6056)	Novel Protein sim. GBank gi 3080521 emb CAA18650 - (AL022599) hypothetical protein [Schizosaccharomyces pombe]	Contains protein domain (PF00400) - WD domain, G-beta repeat	UNCLASSIFIED	22278995, 22278996, 22278997, 22278999, 264259, 29331824, 29331827, 35696052, 264908, 265007, 265008, 265009, 60170831, 21906754, 265011, 87168559, 265018, 264762, 264683, 264765, 264689, 21906765, 21906768, 21906769, 28148629, 35695917, 265021, 265022, 33657109, 27486265, 264628, 264629, 18108374, 35696423, 35695855, 264638, 60170394, 22279000, 22279002, 264482, 264564
3029	87619284 (6057, 6058)			UNCLASSIFIED	22278997, 22278999, 29331827, 264905, 264509, 264909, 264510, 264511, 264512, 87168474, 265019, 18108351, 21906768, 264534, 264690, 264693, 263969, 18108370, 264558, 22279000, 22279002, 264482
3030	87544928 (6059, 6060)	Novel Protein sim. GBank gi 3757726 emb CAA18782 - (AL022727) dJ8019.1 (olfactory receptor-like protein [Hs6M1-1]) [Homo sapiens]	Contains protein domain (PF00001) - 7 transmembrane receptor (rhodopsin family)	im7	
3031	91677953 (6061, 6062)	Novel Protein sim. GBank gi 4530597 gb AAD22105.1 - (AF132000) TADA1 protein [Homo sapiens]		UNCLASSIFIED	22278995, 22278997, 22278998, 22278999, 264259, 29331822, 29331824, 29331826, 29331827, 29331828, 35696052, 264908, 265018, 21906765, 21906766, 21906767, 21906768, 265021, 263974, 18108374, 264558, 56526486, 22279000, 22279002

3032	94130124 (6063, 6064)	Novel Protein sim. GBank gi 1019951 (U37429) - similar to M. musculus MERs and other AHPC/TSA proteins [Caenorhabditis elegans]	Contains protein domain (PF00534) - synthase Glycosyl transferases group 1	22278996, 35696286, 264259, 29331824, 29331828, 284907, 29331830, 284758, 33109954, 87168474, 87168559, 265019, 264288, 21906769, 265021, 284693, 35696423, 35695655, 264636, 56182323, 83373044, 87168518
3033	95308321 (6065, 6066)	Novel Protein sim. GBank gi 5031573 ref NP_005712.1 pACTR - ARP3 (actin-related protein 3, yeast) homolog	Contains protein domain (PF00022) - struct Actin	35696286, 264259, 29331826, 35696052, 284508, 264905, 284908, 284907, 284908, 264909, 265008, 284591, 21906754, 265010, 265019, 284681, 284369, 284768, 21906764, 21906768, 35695917, 33657023, 264628, 35695855, 264632, 264635, 264639, 264482, 264563
3034	80415373 (6067, 6068)		UNCLASSIFIED	264906, 264907, 264510, 264592, 265010, 284762, 284768, 284637, 284638, 284488, 284636
3035	91220692 (6069, 6070)	Novel Protein sim. GBank gi 3738207 emb CAA21262 - (AL031853) conserved ATP-GTP binding protein [Schizosaccharomyces pombe]	UNCLASSIFIED	
3036	91718323 (6071, 6072)	Novel Protein sim. GBank gi 728837 sp P39194 ALU7_HUMAN - IIII ALU SUBFAMILY SQ WARNING ENTRY IIII	kinase	264907, 33657402, 265021
3037	95307434 (6073, 6074)	Novel Protein sim. GBank gi 4406590 gb AAD20040 - (AF131766) Similar to Ena-VASP like protein [Homo sapiens]		265017
3038	95421807 (6075, 6076)	Novel Protein sim. GBank gi 5360093 gb AAD2865.1 AF15509 - (AF155099) NY-REN 18 antigen [Homo sapiens]	Contains protein domain (PF00627) - UBA domain	22278996, 22278997, 264259, 264905, 285007, 265009, 60433356, 21906754, 265018, 265019, 18108351, 264687, 21906765, 265020, 265021, 65274620, 27486282, 264636, 56182323, 18108385, 22279000
3039	87332257 (6077, 6078)	Novel Protein sim. GBank gi 4757128 emb CAB42094.1 - (AJ238717) ZRP protein [Rattus norvegicus]	UNCLASSIFIED	35696286, 29331828, 264109, 264110, 264511, 265007, 21906754, 265011, 264681, 284683, 264687, 21906768, 264691, 18108370, 263972, 264629, 18108374, 263977, 35696423, 264564, 18108391, 264692, 264558, 18108382, 18108385, 264567
3040	90933517 (6079, 6080)	Novel Protein sim. GBank gi 4884278 emb CAB43247.1 - (AL050037) hypothetical protein [Homo sapiens]		
3041	88312357 (6081, 6082)	Novel Protein sim. GBank gi 3876073 emb CAB04122.1 - (Z81505) similar to Zinc finger, C3HC4 type (RING finger); cDNA EST EMBL:D28025 comes from this gene; cDNA EST EMBL:D28024 comes from this gene; cDNA EST EMBL:D33210 comes from this gene; cDNA EST EMBL:D33441 comes from this ...	UNCLASSIFIED	56994075, 22278997, 22278998, 29331827, 33656970, 33109954, 21906754, 87168559, 264600, 264683, 21906765, 21906768, 22279002
3042	85749402 (6083, 6084)	Novel Protein sim. GBank gi 790236 (U21156) - sarcolemmal associated protein-2 [Oryctolagus cuniculus]	glycoprotein	264636

3043	87773026 (6085, 6086)	Novel Protein sim. GBank gjl854065[emb][CAA58337] - (X83413) U88 [Human herpesvirus 6]		UNCLASSIFIED	35696286, 60424269, 35696052, 264508, 264905, 66712502, 56182435, 55811386, 52644296, 55811150, 35695917, 60170615, 33657109, 18108374, 264634, 60431850, 22278996, 22278999, 29331824, 56182435, 264511, 265007, 60170831, 60432229, 60433356, 33109954, 18108351, 264288, 35695917, 18108368, 18108370, 60170394
3044	87646182 (6087, 6088)	Novel Protein sim. GBank gjl4104922 (AF042276) - o251 homolog [Pseudomonas putida]	Contains protein domain (PF01209) - ubiE/COQ5 methyltransferase family	glycoprotein	
3045	94127598 (6089, 6090)	Novel Protein sim. GBank gjl4589680[dbj][BAA76859.1] - (AB023232) KIAA1015 protein [Homo sapiens]	Contains protein domain (PF00096) - Zinc finger, C2H2 type	dna_ma_bind	264488, 264259, 35696052, 264508, 264905, 264508, 264906, 264907, 264909, 264511, 265006, 264591, 264593, 33109954, 264604, 264764, 264683, 264288, 264768, 264768, 21906765, 21906768, 55811957, 35695917, 27486262, 18108370, 264628, 18108374, 35695855, 264630, 264632, 264635, 264563, 264564, 264566
3046	88088247 (6091, 6092)			UNCLASSIFIED	22278999, 29331822, 29331824, 29331825, 29331826, 60432289, 29331827, 29331828, 264908, 52646317, 55811957, 60432113, 22279000, 22279002, 264482, 264564
3047	95089924 (6093, 6094)			UNCLASSIFIED	264488, 22278996, 22278997, 22278999, 29331824, 29331825, 56182435, 264511, 265008, 265009, 265011, 265017, 264766, 21906768, 21906769, 35695917, 52644150, 33657349, 65274791, 35695855, 264555, 60432113, 22279000, 264566
3048	87629419 (6095, 6096)	Novel Protein sim. GBank gjl4588034[gbj][AAD25962.1][AF092878] zinc RING finger protein SAG [Homo sapiens]	Contains protein domain (PF00097) - Zinc finger, C3HC4 type (RING finger)	UNCLASSIFIED	264102, 29148784
3049	88229855 (6097, 6098)	Novel Protein sim. GBank gjl5454158[ref][NP_006286.1]pVARS - valyl-IRNA synthetase 1	Contains protein domain (PF01406) - IRNA synthetases class I (C)	UNCLASSIFIED	22278997, 29331826, 264807, 264758, 87168559, 285018, 264448, 21906768, 265020, 33657109, 35695855, 60432113, 22279000
3050	87643679 (6099, 6100)	Novel Protein sim. GBank gjl4589642[dbj][BAA76843.1] - (AB023216) KIAA0999 protein [Homo sapiens]	Contains protein domain (PF00069) - Eukaryotic protein kinase domain	kinase	264259, 29331825, 264909, 265007, 264512, 265019, 264288, 21906768, 265020, 264693, 18108385, 56526486, 87168518, 22279002, 264566
3051	87750599 (6101, 6102)				22278997, 264595, 265019, 264288, 264693, 87168518
3052	57108030 (6103, 6104)	Novel Protein sim. GBank gjl17528[sp][P14755]CRYL_RABIT - LAMBDA-CRYSTALLIN		dehydrogenase	264534

3053	95350373 (6105, 6106)	Novel Protein sim. GBank gij3947613[emb]CAA19465.1]- (AL023828) cDNA EST EMBL:M89008 comes from this gene: cDNA EST yk282d3.5 comes from this gene [Caenorhabditis elegans]		UNCLASSIFIED	65274572, 56181686, 22278995, 35896286, 22278998, 264259, 60432289, 265008, 265009, 60433438, 21906754, 265010, 87168559, 264603, 265018, 265019, 264763, 264764, 264288, 21906765, 21906766, 21906768, 21906769, 35695917, 18108374, 35696423, 264638, 56182323, 22279000, 264563
3054	86943510 (6107, 6108)	Novel Protein sim. GBank gij1076211[pr]S50755 - hypothetical protein VSP-3 - Chlamydomonas reinhardtii		UNCLASSIFIED	35696286, 35696052, 29331830, 264908, 264909, 264512, 284910, 265017, 264604, 264766, 265020, 33657109, 264628, 35695855, 264638, 264584, 264566, 264486 60424179, 65274572, 56182575, 35696286, 22278998, 22278999, 60432049, 264259, 60424269, 60432289, 35696052, 56182435, 265006, 265009, 60170831, 60432228, 60431735, 60433356, 264594, 60433438, 21906754, 55811386, 265011, 87168559, 265019, 18108351, 264683, 264288, 264369, 264689, 21906768, 55811957, 35695917, 60170815, 33657023, 65274620, 33657109, 35695763, 60431528, 18108374, 55810764, 55811576, 35696423, 65274791, 264636, 60431850, 18108381, 56182323, 60170394, 18108385, 60432113, 264564, 264565, 264566
3055	95350537 (6109, 6110)	Novel Protein sim. GBank gij4680655[gb]AAD27717.1[AF13294 - (AF132942) CGI-08 protein [Homo sapiens]		transport	264488, 264569, 18108394, 52646842, 22278997, 22278998, 22278999, 264259, 66714117, 29331826, 29331827, 35696052, 264508, 264509, 264905, 264906, 264907, 264908, 264909, 265006, 264512, 265007, 265008, 265009, 264910, 33657402, 55812038, 264596, 264758, 265010, 265011, 265017, 265019, 264760, 18108351, 264762, 264763, 264764, 264288, 264766, 264687, 18108357, 264768, 264769, 264689, 21906765, 21906766, 21906767, 21906768, 21906769, 35695917, 265020, 265021, 264691, 264693, 33657109, 18108370, 264628, 264629, 18108374, 55811576, 35696423, 35695855, 264630, 264631, 264632, 264634, 264635, 264636, 264637, 264638, 18108381, 83373044, 18108385, 22279000, 22279002, 264563, 264564, 264565, 264566, 264486, 264567
3056	91661636 (6111, 6112)	Novel Protein sim. GBank gij728837[sp]P39194[ALU7_HUMAN - III] ALU SUBFAMILY SO WARNING ENTRY IIII		glycoprotein	264488, 264569, 18108394, 52646842, 22278997, 22278998, 22278999, 264259, 66714117, 29331826, 29331827, 35696052, 264508, 264509, 264905, 264906, 264907, 264908, 264909, 265006, 264512, 265007, 265008, 265009, 264910, 33657402, 55812038, 264596, 264758, 265010, 265011, 265017, 265019, 264760, 18108351, 264762, 264763, 264764, 264288, 264766, 264687, 18108357, 264768, 264769, 264689, 21906765, 21906766, 21906767, 21906768, 21906769, 35695917, 265020, 265021, 264691, 264693, 33657109, 18108370, 264628, 264629, 18108374, 55811576, 35696423, 35695855, 264630, 264631, 264632, 264634, 264635, 264636, 264637, 264638, 18108381, 83373044, 18108385, 22279000, 22279002, 264563, 264564, 264565, 264566, 264486, 264567

3057	95412746 (6113, 6114)	Novel Protein sim. GBank gij3878119[emb]CAA8860] - (Z49088) similar to GTP-binding protein; cDNA EST EMBL:M89111 comes from this gene; cDNA EST EMBL:D27709 comes from this gene; cDNA EST EMBL:D27709 comes from this gene; cDNA EST EMBL:D73788 comes from this gene; cDNA EST yk353...			struct	264508, 264905, 264907, 264908, 264909, 264510, 264512, 264910, 264592, 264594, 264767, 18108374, 264635, 264555, 264637, 264639, 264563, 264564, 264565, 264486
3058	78646226 (6115, 6116)	Novel Protein sim. GBank			UNCLASSIFIED	264693
3059	87629425 (6117, 6118)	gi458034[gib]AAD25862.1[AF09287] - (AF092878) zinc RING finger protein SAG [Homo sapiens]	Contains protein domain (PF000097) - Zinc finger, C3HC4 type (RING finger)		UNCLASSIFIED	22278995, 22278996, 22278997, 22278998, 22278999, 264490, 264259, 29331824, 29331825, 29331827, 35696052, 29331828, 265007, 60433438, 265017, 265018, 265019, 264681, 264448, 264288, 264768, 21906765, 21906766, 21906767, 21906769, 29148629, 29148784, 265022, 52644150, 18108370, 264636, 18108385, 264563, 264567
3060	79346691 (6119, 6120)				UNCLASSIFIED	264567
3061	87740964 (6121, 6122)				UNCLASSIFIED	264112, 52644296, 21906768, 33657023, 263974, 18108385
3062	87619465 (6123, 6124)	Novel Protein sim. GBank gij4454690[gib]AAD20963] - (AF070657) glutathione S-transferase subunit 13 homolog [Homo sapiens]			transferase	264908, 265008, 18108351, 264566
3063	80078023 (6125, 6126)	Novel Protein sim. GBank gij2246532 (U93872) - ORF 73, contains large complex repeat CR 73 [Kaposi's sarcoma-associated herpesvirus]			UNCLASSIFIED	18108359, 264558
3064	91241526 (6127, 6128)	Novel Protein sim. GBank gij4240315[gib]BAA74936.1] - (AB020720) KIAA0913 protein [Homo sapiens]	Contains protein domain (PF00403) - Heavy-metal-associated domain		UNCLASSIFIED	52646355, 52646842, 65274572, 56182675, 56181686, 22278995, 22278996, 22278997, 22278999, 264259, 60432049, 29331824, 66714117, 264508, 264907, 264908, 56182435, 265009, 60432229, 60433438, 55812038, 52644296, 265018, 264682, 264288, 264686, 264768, 264687, 52644229, 264689, 21906768, 264691, 264692, 264693, 18108370, 18108377, 55811576, 264636, 56182323, 264558, 264639, 18108385, 22279000, 22279002
3065	91639201 (6129, 6130)	Novel Protein sim. GBank gij5656743[gib]AAD45960.1[AC005067] Supported by Human EST H08032.1 (NID:872854), mouse EST AA870042.1 (NID:g2985487), and gencan [Homo sapiens]			UNCLASSIFIED	22278996, 22278998, 264093, 264094, 264095, 29331824, 60424269, 66714117, 264100, 264907, 265007, 265019, 18108351, 264766, 264593, 265011, 265019, 18108351, 264766, 264767, 21906765, 21906768, 264693, 20281069, 22279000, 22279002, 264482, 264566, 264567

3066	91224437 (6131, 6132)	Novel Protein sim. GBank gij4684258[embjCAB43245.1] - (AL050028) hypothetical protein [Homo sapiens]		UNCLASSIFIED	18108397, 22278995, 56994075, 22278996, 264905, 68712502, 265008, 264512, 264910, 264758, 60174639, 264760, 18108351, 264764, 264683, 18108359, 264692, 18108364, 18108368, 18108370, 18108377, 18108379, 60170394, 264567
3067	95422551 (6133, 6134)	Novel Protein sim. GBank gij4689258[gbjAAD27832.1]AF12185 - (AF121859) sorting nexin 9 [Homo sapiens]	Contains protein domain (PF00787) - struct PX domain		264488, 264489, 35696286, 22278996, 56994075, 264259, 29331822, 29331825, 35696052, 29331828, 264508, 264905, 264509, 264906, 264907, 264908, 264909, 264112, 264510, 264511, 264512, 265008, 265009, 264910, 264591, 264592, 264593, 264594, 264757, 264595, 264596, 264758, 265010, 265011, 87168559, 264601, 264602, 264603, 264604, 264605, 265019, 264760, 264762, 264448, 264763, 264764, 264288, 264369, 264768, 264768, 264687, 264769, 264689, 21906765, 21906767, 21906768, 35695917, 265020, 265021, 264534, 52844150, 264691, 33657023, 264693, 264628, 60431528, 263977, 35695855, 264630, 264631, 264634, 264635, 264636, 264637, 264638, 264639, 83373044, 56526486, 87168518, 22279000, 22279002, 264563, 264483, 264564, 264565, 264566, 264567, 264486
3068	85360651 (6135, 6136)	Novel Protein sim. GBank gij3878119[embjCAA88860] - (Z49068) similar to GTP-binding protein; cDNA EST	Contains protein domain (PF01926) - struct GTPase of unknown function		22278995, 56994075, 22278998, 22278999, 264259, 264107, 264905, 29331830, 52644045, 264110, 60170831, 264592, 264594, 33657402, 21906754, 33109954, 87168474, 87168559, 265017, 264448, 264764, 264683, 264766, 52644229, 21906765, 21906766, 21906768, 21906769, 60170615, 33657023, 18108370, 18108376, 264634, 264557, 60170394, 56182323, 18108385, 87168518, 22279000, 264482
3069	95412753 (6137, 6138)	Novel Protein sim. GBank gij3878119[embjCAA88860] - (Z49068) similar to GTP-binding protein; cDNA EST EMBL:M89111 comes from this gene; cDNA EST EMBL:D27709 comes from this gene; cDNA EST EMBL:D27708 comes from this gene; cDNA EST EMBL:D73788 comes from this gene; cDNA EST yk353...			

3070	94319173 (6139, 6140)	Novel Protein sim. GBank gij387778[emb](CAB05527) - (Z83110) cDNA EST yk472b5.3 comes from this gene; cDNA EST yk474a7.3 comes from this gene; cDNA EST yk472b5.5 comes from this gene; cDNA EST yk468c10.3 comes from this gene; cDNA EST yk468c10.5 comes from this gene; cDNA EST EM...		synthase	264488, 22278994, 22278995, 22278996, 56994075, 22278997, 22278999, 264259, 29331822, 29147820, 29331824, 66714117, 29331826, 29146498, 29146499, 66712502, 29331830, 52644045, 56182435, 264511, 265007, 264512, 264910, 60170831, 264592, 264758, 33109954, 21906754, 87168474, 265019, 18108351, 264448, 264683, 264288, 52644229, 264689, 21906765, 21906768, 21906787, 21906769, 35895917, 265020, 265021, 60170815, 52644150, 264691, 33657023, 27486261, 27486264, 264628, 18108370, 18108377, 55811576, 35695855, 264634, 264635, 18108381, 60170394, 56182323, 264558, 83373044, 18108385, 18108387, 56526486, 264404, 264563, 264566
3071	94325573 (6141, 6142)	Novel Protein sim. GBank gij4502425[ref](NP_001709.1)pBMP6 - bone morphogenetic protein 6 precursor	Contains protein domain (PF00085) - Igf Thiodoxin		264488, 65274572, 18108398, 22278996, 35896286, 22278997, 22278998, 22278999, 264259, 29331822, 66714117, 29331826, 35896052, 29331828, 29146498, 29146499, 264907, 264908, 29331830, 264909, 52644045, 56182435, 265006, 265007, 264512, 265008, 265009, 60170831, 60432229, 264592, 60433356, 33657402, 60433438, 33109954, 52644296, 87168474, 265010, 265017, 264681, 264288, 264685, 264766, 264687, 264769, 264689, 21906765, 21906766, 21906787, 21908788, 21908789, 35895917, 265020, 265021, 265022, 60170815, 52644150, 264690, 264691, 264692, 33657023, 264693, 33657109, 263971, 18108374, 18108377, 35696423, 55811576, 65274791, 35695855, 264630, 264635, 264636, 264557, 60170394, 83373044, 60432113, 22279000, 22279002, 264563, 264564, 264565, 264566, 264567, 56182375, 29331822, 29331824, 29331825, 29146498, 264908, 52644045, 56182435, 265009, 60433438, 55812038, 18108351, 264683, 264369, 52644229, 52644150, 33657023, 264693, 33657109, 18108374, 55811576, 65274791, 264555, 56182323, 60432113, 264564
3072	95115892 (6143, 6144)	Novel Protein sim. GBank gij1263289 (U47856) - fibroin-4 [Araneus diadematus]		transcriptfactor	

3073	86147248 (6145, 6146)	Novel Protein sim. GBank gij134840 sp P22528 CORB_HUMAN - CORNIFIN B (SMALL PROLINE-RICH PROTEIN IB) (SPR-IB) (14.9 KD PANCORNULIN)		UNCLASSIFIED	264769
3074	88089351 (6147, 6148)	Novel Protein sim. GBank gij3419847 (AC004982) - similar to yeast hypothetical protein ybk4; similar to P38164 (PID:g586461) [Homo sapiens]		UNCLASSIFIED	264488, 265019, 264448, 264288, 21906767, 264693, 18108368, 18108370, 18108374, 264567
3075	88095752 (6148, 6150)	Novel Protein sim. GBank gij4557349 ref NP_000456.1 pBARD - BRCA1 associated RING domain 1	Contains protein domain (PF000023) - Ank repeat	homeobox	264509, 264907, 264689, 264693, 56526486
3076	87819219 (6151, 6152)			UNCLASSIFIED	18108398, 29331822, 29331827, 60432229, 265017, 264691, 264693
3077	88734277 (6153, 6154)	Novel Protein sim. GBank gij3023956 sp Q00808 HET1_PODAN - VEGETATIBLE INCOMPATIBILITY PROTEIN HET-E-1	Contains protein domain (PF00400) - WD domain, G-beta repeat	kinase	65274572, 35696052, 284511, 60170831, 87168474, 264369, 35695917, 33657182, 27486264, 33657349, 35695763, 35695855, 264639
3078	88089355 (6155, 6156)	Novel Protein sim. GBank gij3900850 (AC004954) - similar to KIAA0600; similar to d1028456 (PID:g3043724) [Homo sapiens]			22279002
3079	87821893 (6157, 6158)	Novel Protein sim. GBank gij3875410 emb CAB02876 - (Z81052) Similarity to Yeast ABC1P protein (SW:ABC1_YEAST); cDNA EST YK229g8.3 comes from this gene; cDNA EST YK229g8.5 comes from this gene [Caenorhabditis elegans]		transport	29331824, 29331826, 264758, 55811386, 265017, 55811150, 52644229, 21906768, 265020, 265021, 264693, 18108376, 264631, 52644332, 22279002
3080	95298274 (6159, 6160)	Novel Protein sim. GBank gij5257221 gb AAD41265.1 - (AF117887) protein arginine methyltransferase [Mus musculus]		interferon	264488, 52644507, 22278996, 22278998, 264490, 264259, 29331824, 66714117, 29331825, 29331826, 29331827, 29331828, 29146499, 264508, 264905, 264828, 52644045, 56182435, 265006, 264591, 264596, 21906754, 60174639, 265010, 264682, 264448, 264763, 264683, 264784, 264288, 264685, 264769, 264688, 264689, 21906765, 21906767, 21906769, 55811957, 35695917, 265020, 60170515, 52644150, 264682, 33657023, 264693, 65274620, 33657109, 27486261, 35695763, 264628, 18108370, 65274791, 264558, 56182323, 60170394, 264482, 264585, 264484
3081	88094864 (6161, 6162)	Novel Protein sim. GBank gij72883 sp P39188 ALU1_HUMAN - IIII ALU SUBFAMILY J WARNING ENTRY IIII		UNCLASSIFIED	18108398, 264509, 264905, 264906, 264907, 264908, 264909, 264510, 264511, 265009, 264910, 264595, 264758, 265011, 265018, 264760, 264761, 264763, 264764, 18108354, 264685, 264766, 264628, 264629, 264630, 264631, 264632, 264634, 264635, 264555, 264638, 18108382, 18108385, 264563, 264565, 264566
3082	80310121 (6163, 6164)				264764, 55811957, 264555, 264564

3083	88095756 (6185, 6166)	Novel Protein sim. GBank gll868241 (U29488) - C56C10.3 gena product [Caenorhabditis elegans]		UNCLASSIFIED	264488, 264259, 29331824, 264106, 265008, 264591, 264592, 21906754, 264288, 264767, 21906768, 21906769, 29148784, 264691, 264632, 22279000
3084	87448568 (6167, 6168)	Novel Protein sim. GBank gll476774 (p1rj)A37475 - probable structural component p38 - borna disease virus			22278995, 60432289, 35696052, 264905, 264906, 264907, 264908, 264909, 265006, 265007, 264910, 264593, 264595, 264758, 264369, 264288, 264766, 35695917, 265020, 18108374, 35696423, 264631, 264556, 264565, 264566, 264587, 264486
3085	87765781 (6169, 6170)	Novel Protein sim. GBank gll2665057 (U80741) - CAGH44 [Homo sapiens]		UNCLASSIFIED	265011, 264681
3086	87769942 (6171, 6172)	Novel Protein sim. GBank gll3894189 (AC005662) - hypothetical protein [Arabidopsis thaliana]		UNCLASSIFIED	22278998, 264092, 264259, 29331822, 29331825, 264108, 264112, 18108351, 264687, 263967, 263974, 55810764, 263981, 18108385, 264487
3087	87462988 (6173, 6174)				52646365, 56994075, 22278997, 22278998, 29331824, 29331825, 35696052, 60433438, 33109954, 21906754, 52646317, 265017, 264682, 264369, 264684, 21906767, 21906768, 265020, 264691, 33657023, 33657109, 52643129, 33657182, 27486262, 35695855, 87168518
3088	91224441 (6175, 6176)	Novel Protein sim. GBank gll3355304 (AF001548) - Unknown gene product [Homo sapiens]		UNCLASSIFIED	264591
3089	95361242 (6177, 6178)	Novel Protein sim. GBank gll4689146 (gb)AAD27782.1 (AF077049) lambda- crystallin [Homo sapiens]	Contains protein domain (PF00725) - 3-hydroxyacyl-CoA dehydrogenase	dehydrogenase	18108397, 65274572, 56182575, 56181686, 56994075, 35696286, 22278997, 22278998, 264259, 29331824, 29331825, 29331826, 29331828, 264907, 29331830, 264909, 56182435, 264510, 265007, 60170831, 60432229, 21906754, 55811386, 265017, 265018, 265019, 264760, 55811150, 264288, 264766, 56181562, 21906765, 21906766, 21906767, 21906768, 265021, 60170515, 27486262, 18108370, 60431528, 35696423, 264558, 264559, 60432113, 264486

3090	95342371 (6179, 6180)	Novel Protein sim. GBank gij1354050 (U47024) - MEM3 [Mus musculus]	UNCLASSIFIED	60424179, 52645156, 65274572, 56182575, 56181686, 22278995, 35696286, 56994075, 22278996, 22278998, 22278999, 264459, 29331822, 56182181, 29331824, 29331825, 29331826, 29331827, 29331828, 35696052, 33659970, 264908, 264908, 52844045, 264828, 265006, 265007, 265008, 60170831, 60432229, 60433356, 33657402, 55812038, 264758, 21906754, 33109954, 52846317, 55811386, 52844296, 87168474, 265011, 87168559, 265017, 265018, 265019, 55811150, 18108351, 264681, 264448, 264288, 264369, 18108357, 264768, 52644228, 56181562, 21906764, 21906765, 21906766, 21906767, 21906768, 21906769, 35695917, 265020, 265022, 60170615, 264690, 52844150, 264691, 33657023, 18108365, 65274620, 33657109, 18108368, 33657182, 27486261, 27486265, 35695763, 18108374, 18108378, 55810784, 35696423, 55811576, 65274791, 35695855, 264557, 56182323, 83373044, 18108387, 18108388, 87168518, 22279000, 22279002, 264563, 264482
3091	95317424 (6181, 6182)	Novel Protein sim. GBank gij3873932(emb)(CAB01859) - (Z79596) Similarity to Bovine aspartyl beta hydroxylase (TR:G162694); cDNA EST EMBL:D27916 comes from this gene; cDNA EST EMBL:D27915 comes from this gene; cDNA EST EMBL:D64881 comes from this gene; cDNA EST EMBL:D68139 comes f...	UNCLASSIFIED	35696286, 29331822, 35696052, 264508, 264509, 264905, 264908, 264908, 264909, 264510, 264758, 265010, 265011, 264683, 264685, 264766, 264768, 264769, 264693, 264628, 35696423, 35695855, 264632, 264635, 264639, 264482, 264563, 264486

3092	95314592 (6183, 6184)	Novel Protein sim. GBank gil1710756 sp P15880 RS2_HUMAN - 40S RIBOSOMAL PROTEIN S2 (S4) (LLREP3 PROTEIN)	Contains protein domain (PF00333) - ribosomal prot Ribosomal protein S5	264488, 60424179, 18108396, 22278995, 56994075, 22278996, 35698286, 22278997, 22278998, 60432049, 264259, 29331822, 29331824, 29331825, 29331826, 29331827, 35696052, 29331828, 29146488, 29146489, 264508, 264509, 264905, 264906, 264907, 29331830, 264908, 264909, 264113, 264510, 264511, 265006, 264512, 265007, 265008, 264910, 265009, 60170831, 264591, 264592, 60431735, 264593, 264594, 60433438, 264595, 264758, 21906754, 265010, 265011, 264601, 264602, 265017, 264603, 264604, 265018, 264605, 265019, 264760, 264762, 264681, 18108351, 264763, 264682, 264448, 264764, 264683, 264288, 264369, 264765, 264766, 264686, 264767, 264687, 264768, 264769, 264688, 21906764, 264689, 21906765, 21906766, 21906767, 21906768, 21906769, 29148629, 29148784, 35695917, 265020, 265021, 264534, 60170815, 264690, 264691, 264692, 65274620, 33657109, 27486262, 264628, 264629, 18108374, 263978, 18108377, 35696423, 264630, 264631, 264632, 264634, 264635, 264555, 264636, 264637, 264556, 264638, 264557, 264558, 264639, 60170394, 18108385, 264259, 29331824, 35696052, 264805, 265006, 60432228, 60431735, 264684, 264369, 264288, 264766, 21906767, 35698423, 83373044, 18108385
3093	94318457 (6185, 6186)	Novel Protein sim. GBank gil5002587 emb CAB44347.1 - (Y17454) LSFR1 protein [Homo sapiens]	UNCLASSIFIED	
3094	94318675 (6187, 6188)	Novel Protein sim. GBank gil400734 sp P31044 PBP_RAT - PHOSPHATIDYLETHANOLAMINE-BINDING PROTEIN (23 KD MORPHINE-BINDING PROTEIN) (P23K)	Contains protein domain (PF01161) - collagen protein	18108398, 264259, 60432289, 29331827, 264511, 264763, 264288, 264767, 265022, 264691, 264693, 65274791, 56182323, 264584, 264585

3095	94848162 (6189, 6190)	Novel Protein sim. GBank gij487759jgbjAAD31421.1 AF12444 - (AF124440) MAGE tumor antigen D1 [Homo sapiens]	Contains protein domain (PF01454) - MAGE family	UNCLASSIFIED	18108397, 56182575, 22278995, 35696286, 56994075, 22278997, 22278999, 264259, 60432049, 66714117, 29331825, 60432289, 35696052, 33656970, 29146499, 264508, 264905, 264509, 29331830, 264809, 264510, 264511, 264512, 265007, 265008, 265009, 60170831, 264758, 21906754, 85658542, 265010, 265011, 87168559, 265017, 265018, 265019, 264760, 264681, 264682, 264683, 264764, 264369, 264288, 264686, 264768, 264769, 264689, 21906785, 21906766, 21906767, 55811957, 35695917, 265020, 265021, 265022, 52644150, 264691, 264692, 33657023, 264693, 263972, 18108376, 55811576, 35696423, 264952, 60170394, 264639, 83373044, 18108385, 18108387, 65274727, 87168518, 60432113, 264482, 264563, 264564, 264566, 264487, 18108391
3096	87756128 (6191, 6192)	Novel Protein sim. GBank gij3882221 dbj BAA34470.1 - (AB018293) KIAA0750 protein [Homo sapiens]	Contains protein domain (PF00307) - Calponin homology (CH) domain	struct	22278995, 22278996, 22278997, 22278999, 29331824, 29331825, 29331826, 29331827, 33656970, 264905, 264908, 265008, 264910, 33657402, 265011, 265017, 265018, 264369, 21906766, 21906767, 21906768, 35695917, 265020, 60170615, 264691, 264692, 264693, 27486261, 27486262, 18108370, 60431528, 264634, 264636, 264639, 22279000, 264566 264488, 29331822, 29331825, 60432289, 29331828, 35696052, 29331828, 29331830, 264594, 55812038, 33109954, 33657084, 87168474, 87168559, 52644229, 21906765, 21906767, 18108376, 35696423, 52644332, 264638, 60432113, 22279002
3097	88264895 (6193, 6194)	Novel Protein sim. GBank gij4468288 emb CAB37981 - (AL022395) dJ273N12.1 (PUTATIVE protein based on EST matches) [Homo sapiens]	Contains protein domain (PF00646) - F-box domain.	UNCLASSIFIED	264634, 264637, 264565 264488, 35696286, 29331822, 29331824, 29331825, 29331827, 265007, 265008, 265010, 265011, 265018, 265019, 18108357, 21906766, 265020, 265022, 55811576, 56182323, 22279002, 264563
3098	80258024 (6195, 6196)				264634, 264637, 264565
3099	91243325 (6197, 6198)	Novel Protein sim. GBank gij303603 dbj BAA02145.1 - (D12621) cytochrome P-450L TBV [Homo sapiens]		cyto450	264488, 35696286, 29331822, 29331824, 29331825, 29331827, 265007, 265008, 265010, 265011, 265018, 265019, 18108357, 21906766, 265020, 265022, 55811576, 56182323, 22279002, 264563
3100	67602421 (6199, 6200)	Novel Protein sim. GBank gij1083764 pir B48013 - proline- rich proteoglycan 2 precursor, parotid - rat		UNCLASSIFIED	29331825, 60432289, 35696052, 264910, 60432229, 264592, 264288, 264693, 263967, 264635
3101	79602134 (6201, 6202)			UNCLASSIFIED	264908, 264693, 264628, 264630, 264632

3102	91220892 (6203, 6204)	Novel Protein sim. GBank gi 5305706 gb AAD41781.1 AF12853 - (AF128536) cytoplasmic phosphoprotein PACSIN2 [Homo sapiens]	Contains protein domain (PF00018) - SH3 domain	- struct	35696286, 22278996, 22278999, 29331827, 35696052, 264909, 264512, 265008, 60170831, 60433356, 33109954, 18108351, 264684, 264689, 21906767, 60170615, 264692, 33657023, 264638, 22279000, 264482, 264564
3103	90938004 (6205, 6206)	Novel Protein sim. GBank gi 464564 sp P35292 RB17_MOUSE - RAS-RELATED PROTEIN RAB-17		UNCLASSIFIED	35695917, 264565
3104	87340633 (6207, 6208)	Novel Protein sim. GBank gi 5032207 ref NP_005696.1 pTSSC - tumor-suppressing STF cDNA 6		UNCLASSIFIED	264259, 264684, 264532, 33657182, 264558
3105	94148603 (6209, 6210)				22278997, 264259, 29331824, 35696052, 29331828, 264508, 264509, 264905, 264906, 264907, 264908, 264511, 264910, 264591, 264594, 264758, 264760, 264681, 264762, 264764, 264288, 264766, 264768, 264687, 264769, 21906766, 21906768, 35695917, 33657023, 264692, 264693, 264632, 264634, 35695855, 264630, 264631, 264632, 264634, 264635, 264637, 264638, 264639, 83373044, 264404, 22279002, 264563, 264565, 264566, 264486, 264567
3106	95361416 (6211, 6212)	Novel Protein sim. GBank gi 1938574 (U97190) - B0025.2 gene product [Caenorhabditis elegans]			22278996, 22278997, 22278998, 22278999, 264092, 264093, 264094, 29331822, 264906, 264907, 264908, 52644045, 56182435, 264112, 265008, 265009, 55812038, 265017, 265018, 264683, 264686, 264687, 264768, 52644229, 21906765, 21906768, 21906769, 55811957, 265020, 265022, 264690, 52644150, 264692, 264693, 18108370, 18108377, 55811576, 56182323, 18108385, 18108388, 22279000, 264563
3107	95343272 (6213, 6214)	Novel Protein sim. GBank gi 3341441 emb CAA768511 - (Y17794) winged-helix transcription factor [Gallus gallus]			22278995, 22278996, 35696286, 22278997, 22278999, 264091, 264093, 264259, 29331822, 29331825, 29331826, 60432289, 29331827, 29331828, 33656970, 264105, 264512, 265009, 60433356, 60433438, 265011, 265017, 265018, 21906765, 21906766, 21906767, 27486261, 27486265, 18108370, 263972, 18108374, 55811576, 18108385, 56526486, 264482, 264487, 56182435, 264288, 264690, 264564
3108	87340635 (6215, 6216)	Novel Protein sim. GBank gi 5032207 ref NP_005696.1 pTSSC - tumor-suppressing STF cDNA 6		UNCLASSIFIED	

3109	94318461 (6217, 6218)	Novel Protein sim. GBank gll5002587[emb CAB44347.1] - (Y17454) LSFRT protein [Homo sapiens]	Contains protein domain (PF00096) - Zinc finger, C2H2 type	struct	264480, 264808, 265007, 264910, 264593, 264883, 264884, 264687, 21906767, 21906768, 264693, 18108370, 264629, 18108374, 264632, 264638, 22279000
3110	95090716 (6218, 6220)	Novel Protein sim. GBank gll1076211[pir S50765 - hypothetical protein VSP-3 - Chlamydomonas reinhardtii]		UNCLASSIFIED	264488, 65274572, 22278995, 22278997, 60432049, 264259, 29331822, 29331824, 29331825, 60432289, 29331826, 29331827, 29331828, 264906, 264510, 265006, 265007, 265008, 265009, 60432229, 33637402, 60433356, 265011, 87168559, 264600, 265017, 265018, 265019, 18108351, 264288, 264369, 21906766, 21906767, 21906768, 265020, 60170615, 264693, 65274620, 18108370, 264639, 18108384, 22279000, 264583, 18108390
3111	87754512 (6221, 6222)	Novel Protein sim. GBank gll3282231 (U75454) - C2H2 type zinc finger protein [Homo sapiens]	Contains protein domain (PF00096) - Zinc finger, C2H2 type	transcriptfactor	264488, 18108398, 66712502, 265017, 265018, 265019, 264448, 21906767, 265020, 33657023, 18108365, 18108368, 35698423, 52644332, 18108385, 18108388
3112	88043639 (6223, 6224)	Novel Protein sim. GBank gll3900848 (AC005023) - match to EST AA381117 (NID:G2013438) [Homo sapiens]	Contains protein domain (PF00046) - Homeobox domain	homeobox	
3113	88207098 (6225, 6226)	Novel Protein sim. GBank gll2459910 (AF005856) - anon2A5 [Drosophila yakuba]		im7	18108397, 22278999, 264259, 29331824, 35896052, 264907, 264757, 60433438, 87168559, 264763, 264448, 18108354, 264288, 21906767, 21906769, 35695917, 264690, 264691, 264692, 264693, 18108365, 18108381, 18108384, 18108385, 18108388, 87168518, 22279000, 22279002
3114	79843167 (6227, 6228)	Novel Protein sim. GBank gll4986270[gb AA052261.2] - (U97002) similar to acyl-CoA dehydrogenases and epoxide hydrolases; Pfam domain PF00441 (Acyl-CoA_dh). Score=57.4, E-value=1.7e-16, N=2; contains similarity to Pfam domain PF00702 (Hydrolase). Score=57.4, E-value=1e-13, N=1 [C...]	Contains protein domain (PF00702) - haloacid dehalogenase-like hydrolase	hydrolase	264909, 56182435, 264910, 21906754
3115	84117986 (6229, 6230)	Novel Protein sim. GBank gll5032225[ref NP_005676.1]pWBSC - Williams-Beuren syndrome chromosome region 11		transcriptfactor	60424179, 56182575, 264259, 29331824, 60424269, 29331826, 66712502, 264510, 265007, 60431735, 60433356, 55812038, 55811386, 265019, 264288, 264689, 21906769, 264691, 33657023, 264693, 60431528, 263974, 60431850, 56182323, 264559, 22279000, 22279002
3116	79842855 (6231, 6232)			UNCLASSIFIED	264905, 264758, 21906764, 264690
3117	8771288 (6233, 6234)			UNCLASSIFIED	264510, 265011, 18108351, 264288, 264689, 264691, 18108368, 18108372, 263981, 264558, 264564

3118	94665848 (6235, 6236)	Novel Protein sim. GBank gij3880563[emb]CA801444.1] - (Z78018) predicted using Genefinder; similar to serine/threonine kinase; cDNA EST yk353d10.5 comes from this gene [Caenorhabditis elegans]	Contains protein domain (PF00008) - EGF-like domain	52645156, 52646842, 65274572, 56182575, 22278995, 56994075, 22278996, 35696286, 22278997, 22278998, 22278999, 264259, 29331822, 29331824, 66714117, 29331828, 29331827, 35696052, 29331828, 264905, 264908, 29331830, 52644045, 56182435, 264510, 264511, 265007, 265008, 265009, 264757, 52646317, 21906754, 33657084, 52644296, 87168474, 87168559, 265017, 265018, 264605, 265019, 264762, 264448, 264682, 264684, 264288, 264766, 56181562, 21906765, 21906766, 21906768, 21906769, 265020, 265022, 264690, 52644150, 264691, 33657023, 264693, 33657109, 33657349, 264628, 18108370, 60431528, 18108374, 33656423, 65274791, 60170394, 83373044, 87168518, 22279000, 22278002, 264486, 265006, 264288
3119	85728796 (6237, 6238)		Contains protein domain (PF00328) - Histidine acid phosphatase	
3120	87344040 (6239, 6240)	Novel Protein sim. GBank gij5019819[gb]AAD37863.1[AF14315 - (AF143152) putative NADH oxidoreductase complex I subunit [Caenorhabditis elegans]	UNCLASSIFIED	264488, 264509, 264510, 264511, 264512, 264288, 264486
3121	94110735 (6241, 6242)	Novel Protein sim. GBank gij4501877[ref]NP_001088.1pACRI - acrosin		52644507, 52645156, 52646365, 52646842, 22278994, 56994075, 22278996, 22278999, 264259, 29331824, 29331827, 35696052, 52644045, 265008, 52646317, 87168474, 87168559, 21906765, 52644150, 33657023, 18108374, 264637
3122	11814528 (6243, 6244)		UNCLASSIFIED	264638
3123	88083003 (6245, 6246)	Novel Protein sim. GBank gij2439517 (AC002563) - putative RHO/RAC effector protein; 95% similarity to P49205 (PID.g1345860) [Homo sapiens]	Contains protein domain (PF00780) - CNH domain	18108392, 29331822, 29331824, 29331825, 264905, 265007, 55812038, 265019, 18108351, 264682, 264288, 264766, 21906764, 21906765, 21906768, 21906769, 55811957, 18108365, 18108366, 27486265, 18108374, 18108381, 18108384, 22279000, 22279002, 264482
3124	87786899 (6247, 6248)		UNCLASSIFIED	264905
3125	81216607 (6249, 6250)	Novel Protein sim. GBank gij4980826[gb]AAD35412.1[AE00171 - (AE001714) oxidoreductase, short chain dehydrogenase/reductase family [Thermotoga maritima]	Contains protein domain (PF00106) - short chain dehydrogenase	56181686, 264259, 66714117, 60432289, 29331826, 29331827, 264907, 264908, 264828, 265009, 60433356, 33657402, 60433438, 264758, 18108351, 264288, 29148627, 29148629, 33657023, 33657109, 18108382, 56526486

3126	95337205 (6251, 6252)			UNCLASSIFIED	22278999, 264490, 264259, 60432049, 29331822, 60432289, 29146498, 52644045, 56182435, 265009, 60433438, 265010, 87168559, 265017, 265018, 55811150, 264763, 264683, 264369, 264685, 29148629, 33657023, 264693, 33657109, 18108374, 55811576, 18108385, 60432113, 22279002, 33659286, 22278996, 22278999, 29331828, 264908, 60433438, 87168559, 264604, 21906765, 21906769, 33657023, 33657349, 264629, 18108374, 18108377, 22279000, 22279002
3127	91839233 (6253, 6254)	Novel Protein sim. GBank gij2828280[emb][CAA16694.1] - (AL021687) putative protein [Arabidopsis thaliana]			
3128	87674330 (6255, 6256)	Novel Protein sim. GBank gij3885828 (AF090133) - lin-7-A [Rattus norvegicus]	Contains protein domain (PF00595) - PDZ domain (Also known as DHR or GLGF).	misc_channel	22278996, 264259, 52644045, 265008, 21906754, 265017, 265018, 21906768, 18108376, 18108387, 22279000, 22279002
3129	87755412 (6257, 6258)	Novel Protein sim. GBank gij3135273 (AC003058) - hypothetical protein [Arabidopsis thaliana]	Contains protein domain (PF00400) - WD domain, G-beta repeat	kinase	56182575, 264259, 29331825, 29331828, 52644045, 56182435, 60433356, 264600, 264682, 264763, 264764, 264369, 264288, 264686, 55811957, 264692, 33657023, 33657109, 60432113, 264584, 264566, 264636
3130	14993960 (6259, 6260)	Novel Protein sim. GBank gij3329465 (AF064553) - NSD1 protein [Mus musculus]			
3131	95351469 (6261, 6262)	Novel Protein sim. GBank gij1848277 (U86136) - telomerase-associated protein TP-1 [Homo sapiens]	Contains protein domain (PF00400) - WD domain, G-beta repeat	UNCLASSIFIED	56182575, 264259, 29331824, 264907, 56182435, 264594, 60433438, 55812038, 33109954, 21906754, 33657084, 87168474, 264448, 264766, 21906769, 55811957, 265020, 265021, 265022, 60170615, 33657023, 33657109, 33657182, 27486261, 33657349, 65274791, 60170394, 56182323, 83373044, 87168518, 264564

3132	85415459 (6263, 6264)	Novel Protein sim. GBank gij4680647jbbjAAD27713.1jAF13293 - (AF132938) CGI-03 protein [Homo sapiens]	Contains protein domain (PF00789) - ubiquitin UBX domain	52644507, 52646842, 52646355, 65274572, 56182575, 22278994, 22278995, 35696286, 56994075, 22278996, 22278997, 22278998, 22278999, 60432049, 52645080, 29331822, 29331824, 29331825, 60432289, 29331826, 29331827, 29331828, 35696052, 264508, 52644045, 56182435, 264810, 60170831, 60432229, 60433356, 33657402, 55812038, 52646317, 21906754, 52644296, 85658542, 87168559, 265017, 265018, 265019, 264448, 264288, 264369, 52644229, 21906765, 21906766, 21906767, 21906768, 21906769, 35695917, 265020, 265021, 60170815, 52644150, 264692, 33657023, 52645129, 33657109, 33657182, 27486261, 27486262, 27486265, 33657349, 35695763, 18108374, 18108376, 55811576, 35695855, 18108385, 18108387, 56526486, 87168518, 60432113, 22279002
3133	87379414 (6265, 6266)	Novel Protein sim. GBank gij4507613jre NP_003738.1pTNKS - TANKYRASE	polymerase	22278994, 22278998, 264905, 265008, 265007, 87168559, 264760, 21906767, 18108374, 22279000, 22279002, 264563
3134	84649816 (6267, 6268)	Novel Protein sim. GBank gij1728827isp P54633 ITALA_DICD1 - FILOPODIN (TALIN HOMOLOG)	struct	22278996, 264095, 29331826, 33657402, 18108348, 263974
3135	86389356 (6269, 6270)	Novel Protein sim. GBank gij3093478 (AF012927) - fibrinogen-binding protein [Streptococcus equi]	Contains protein domain (PF00153) - transport Mitochondrial carrier proteins	22278998, 264259, 264828, 265006, 265008, 60433438, 265019, 264764, 264288, 264769, 264689, 265020, 27486262, 263972, 65274791, 264557, 264558
3136	84845839 (6271, 6272)	Novel Protein sim. GBank gij627101pr JS44092 - probable carrier protein c2 - Caenorhabditis elegans.	UNCLASSIFIED	22278995, 22278996, 22278997, 22278998, 22278999, 264259, 29331822, 29331825, 29331826, 29331827, 29331828, 264510, 265008, 21906754, 87168474, 265011, 87168559, 265017, 265018, 265019, 18108351, 264682, 264769, 21906765, 21906766, 21906767, 21906769, 55811957, 35695917, 265020, 265021, 52644150, 18108370, 18108374, 22279000, 22279002, 264482, 264486
3137	88257947 (6273, 6274)	Novel Protein sim. GBank gij3342730 (AC005331) - R31341_1 [Homo sapiens]		

3138	94130186 (6275, 6276)	Novel Protein sim. GBank gii408759[gbjAA020070] - (AC006636) hypothetical protein [Arabidopsis thaliana]			264569, 264488, 264907, 264511, 264593, 33109954, 87188559, 264681, 264684, 264685, 264686, 264687, 264768, 264688, 264689, 264691, 264692, 264693, 33657109, 264631, 264634, 264635, 264636, 264637, 50170394, 83373044, 18108385, 18108388, 50432113, 22279000, 22279002
3139	87325503 (6277, 6278)	Novel Protein sim. GBank gii228938[prfj]1814452C - Hyp-rich glycoprotein [Zea diploperennis]	UNCLASSIFIED		22278997, 22278998, 22278999, 264905, 265018, 265019, 21908765, 265020, 264636, 264557
3140	91222692 (6278, 6280)	Novel Protein sim. GBank gii932[emb]CAA37773] - (X53744) 88kDa subunit of signal recognition particle [Canis familiaris]	strict		22278995, 56994075, 35696286, 264908, 264909, 60433356, 21906754, 52644296, 87188474, 87188559, 264683, 264288, 264685, 264686, 265022, 264693, 27486282, 35695855, 264630, 264555, 264566
3141	87323564 (6281, 6282)	Novel Protein sim. GBank gii3213227 (AF035209) - putative v-SNARE Vti1a [Mus musculus]	UNCLASSIFIED		56182575, 35696286, 29331828, 264909, 265009, 265018, 18108351, 264369, 21906766, 29148627, 265020, 264628, 264629, 264631, 18108385
3142	95418028 (6283, 6284)	Novel Protein sim. GBank gii2498197[sp]Q95245[C561_PIG - CYTOCHROME B561 (CYTOCHROME B-561)]	cytochrome		52645158, 52646365, 22278995, 35696286, 22278998, 22278999, 60432049, 284259, 29331822, 29331824, 29331827, 29146499, 56182435, 265007, 60170831, 60432229, 33657402, 264595, 60433438, 264758, 21906754, 264288, 264766, 264687, 52644229, 21906765, 21906767, 21906768, 60170815, 52644150, 65274620, 33657109, 35695763, 18108370, 18108376, 65274791, 35695855, 264631, 264557, 87188518, 60432113, 22279000
3143	95351475 (6285, 6286)	Novel Protein sim. GBank gii5420387[emb]CAB46679.1] - (AJ243459) proteophosphoglycan [Leishmania major]	UNCLASSIFIED		264488, 56182575, 22278996, 22278998, 22278999, 29331822, 29331824, 60432289, 35696052, 29331828, 264508, 264905, 264908, 264907, 264908, 264909, 52644045, 56182435, 264511, 264512, 265008, 264910, 60432229, 33657402, 60433356, 60433438, 55812038, 265011, 265019, 264760, 264763, 264448, 264764, 264684, 264288, 264685, 264686, 264768, 264689, 21906765, 21906766, 21906767, 21906769, 35695917, 264690, 33657023, 264693, 263967, 33657109, 264628, 264629, 18108374, 263976, 55811576, 35695855, 264630, 264631, 264632, 264634, 264635, 264636, 264637, 264558, 87188518, 60432113, 22279000, 22279002, 264563, 264566, 264486

3144	95336329 (6287, 6288)	Novel Protein sim. GBank gj484468[emb]CAB43322.1] - (AL050225) hypothetical protein [Homo sapiens]			264488, 18108396, 22278996, 35696286, 22278997, 22278998, 29331826, 29331827, 35696052, 29331828, 264106, 265006, 265007, 265009, 33657402, 85858542, 265011, 18108351, 264448, 264369, 21906765, 21906766, 21906767, 265020, 265021, 52644150, 27486261, 18108370, 18108374, 35696423, 56182323, 83373044, 22279000, 22279002, 264567
3145	86611657 (6289, 6290)	Novel Protein sim. GBank gj3879709[emb]CAB033301 - (ZB1118) Similarity to Human endosomal protein P162 (TR:Q15075); cDNA EST EMBL:Z14487 comes from this gene; cDNA EST EMBL:Z14556 comes from this gene; cDNA EST EMBL:D27011 comes from this gene; cDNA EST EMBL:D27015 comes from this gene	UNCLASSIFIED		18108397, 29331824, 29146499, 20281100, 265006, 58812038, 265010, 21908786, 29148627, 21906769, 29148784, 264692, 33657023, 33657109, 35695763, 263981, 56182323, 87168518
3146	87756314 (6291, 6292)	Novel Protein sim. GBank gj2135746[pr]S69890 - mitogen inducible gene mlg-2 - human	Contains protein domain (PF00169) - PH domain	struct	264259, 29331826, 29331828, 29331830, 264510, 264511, 265007, 265009, 264600, 265017, 18108351, 284448, 264369, 21908766, 265021, 264692, 33657109, 18108374, 35696423, 35695855, 60432113, 264564
3147	94848512 (6293, 6294)	Novel Protein sim. GBank gj3874279[emb]CAB07315.1] - (Z92825) predicted using GeneFinder; cDNA EST YK315e12.3 comes from this gene; cDNA EST YK315e12.5 comes from this gene [Caenorhabditis elegans]	Contains protein domain (PF00702) - haloacid dehalogenase-like hydrolase	UNCLASSIFIED	56181686, 35696286, 60432049, 264259, 56182181, 29331825, 60432289, 35696052, 56182435, 265008, 264910, 60431735, 60433356, 60433438, 265010, 264448, 264288, 265022, 33657023, 33657109, 60431528, 65274791, 264631, 56182323, 264404, 22279002
3148	95382169 (6295, 6296)	Novel Protein sim. GBank gj5225322[gb]AAD40851.1[AF08310] - (AF083108) siruin type 3 [Homo sapiens]	UNCLASSIFIED		35696286, 35696052, 264511, 85658542, 87168474, 264784, 35696423, 264555, 264556, 264557, 264558, 83373044, 56526486, 60432113
3149	95308548 (6297, 6298)	Novel Protein sim. GBank gj4200448 (AF102777) - FYVE finger-containing phosphoinositide kinase [Mus musculus]	Contains protein domain (PF01363) - FYVE zinc finger	eph	29331822, 35696052, 264109, 29148629, 18108381
3150	87655472 (6299, 6300)	Novel Protein sim. GBank gj3378454[emb]CAA76893] - (Y17850) ganglioside-induced differentiation associated protein 1 [Mus musculus]	Contains protein domain (PF00043) - Glutathione S-transferases	transferase	264259, 29331822, 29331824, 29331825, 29331827, 52846317, 264686, 35695855, 56182323, 264639
3151	87772355 (6301, 6302)	Novel Protein sim. GBank gj172591 (M63577) - SFP1 [Saccharomyces cerevisiae]	Contains protein domain (PF00096) - Zinc finger, C2H2 type	oncogene	29331822, 265008
3152	85698108 (6303, 6304)		UNCLASSIFIED		21908754, 87168559, 264605, 21906768, 52644150, 27486264, 35696423, 22279000

3153	95317288 (6305, 6306)	Novel Protein sim. GBank gi4895041 gb AAD32705.1 AF14395 - (AF143957) coronin-3 [Mus musculus]	Contains protein domain (PF00400) - WD domain, G-beta repeat	- struct	264488, 52646365, 35696286, 22278996, 22278997, 22278999, 60432048, 264259, 29331826, 60432289, 33656970, 264508, 264908, 33657402, 264595, 60433438, 87168474, 87168559, 264601, 265019, 264448, 264682, 264764, 264288, 264369, 264768, 21906765, 21906766, 21906767, 21906768, 21906769, 29148784, 265021, 265022, 60170615, 52644150, 264690, 264691, 33657023, 65274620, 33657109, 18108370, 35695855, 264638, 60170394, 87168518, 60432113, 22279000, 22279002, 22278998, 264259, 29331824, 66712502, 265008, 265010, 265017, 18108354, 264691, 33657023, 264693, 20281149, 18108374
3154	87716573 (6307, 6308)	Novel Protein sim. GBank gi4880661 gb AAD27720.1 AF13294 - (AF132945) CGI-11 protein [Homo sapiens]	ATPase associated		
3155	87762394 (6309, 6310)	Novel Protein sim. GBank gi728837 sp P39194 ALU7_HUMAN - IIII ALU SUBFAMILY SQ WARNING ENTRY IIII	UNCLASSIFIED		29331828, 264509, 264905, 264908, 264510, 264511, 264512, 33657402, 264681, 264683, 33657023, 18108370, 264634, 264639, 18108385, 264563, 264488
3156	87737449 (6311, 6312)	Novel Protein sim. GBank gi5630076 gb AAD45821.1 AC006017 N-acetylglucosaminyltransferase, similar to Q10473 (PID: g1709559) [Homo sapiens]	Contains protein domain (PF00652) - Similarity to lectin domain of ricin beta-chain, 3 copies.	- transferase	56182575, 22278996, 22278997, 22278998, 22278999, 60432049, 264259, 29331822, 29331824, 66714117, 29331825, 29331826, 29331827, 35696052, 52644045, 265007, 265009, 60170831, 60432229, 60433356, 21906754, 33109954, 87168474, 265010, 265017, 265018, 265019, 18108351, 264448, 264288, 264689, 21906766, 21906768, 21906769, 35695917, 265020, 265022, 264692, 18108370, 35696423, 56182323, 22279002
3157	88259577 (6313, 6314)				18108396, 264259, 29331826, 35696052, 29146498, 87168559, 265017, 264448, 264288, 264691, 18108366, 52645129, 35696423, 52644332
3158	80034118 (6315, 6316)	Novel Protein sim. GBank gi5306064 gb AAD41895.1 AF15677 - (AF156778) ASB-3 protein [Homo sapiens]	Contains protein domain (PF00023) - Ank repeat	kinase	264488, 263974
3159	94124114 (6317, 6318)	Novel Protein sim. GBank gi5531272 emb CAB50897.1 - (AJ243800) WSC4 homologue [Kluyveromyces fragilis]		UNCLASSIFIED	56182575, 22278999, 29331824, 264106, 60433356, 264758, 265011, 87168559, 264448, 18108354, 264768, 21906768, 265020, 264691, 264692, 33657109, 18108374, 35696423, 264555, 60170394, 22279000
3160	80221088 (6319, 6320)	Novel Protein sim. GBank gi3930525 (AF064447) - sex-determination protein homolog Fem1a [Mus musculus]	Contains protein domain (PF00023) - Ank repeat	- struct	18108351, 264555, 264556, 264557, 264558, 264559

3161	88074111 (8321, 8322)				264488, 22278995, 22278997, 22278998, 264259, 29331822, 60432289, 29331828, 52644045, 265017, 265018, 264448, 264288, 21806764, 21806767, 265020, 18108374, 264636, 264566
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Table 2

Tissue ID	Tissue Name	Tissue Information	Disease Association
20281069	192xN	Protein-protein Interactions	Any
20281071	192xN	Protein-protein Interactions	Any
20281149	192xN	Protein-protein Interactions	Any
20281152	192xN	Protein-protein Interactions	Any
264111	276xN	Protein-protein Interactions	Any
264112	276xN	Protein-protein Interactions	Any
263966	384xN	Protein-protein Interactions	Any
263967	384xN	Protein-protein Interactions	Any
264110	552xN	Protein-protein Interactions	Any
18108379	SPH 52.1 (Adrenal Gland)	Adrenal Gland/Suprarenal gland	Adrenoleukodystrophy , Congenital Adrenal Hyperplasia,
18108381	SPH 52.2 (Fetal Lung)	Fetal Lung	Cystic Fibrosis, infection, lung cancer
18108383	SPH 52.3 (B's Lymphoma- Raji)	Lymphoma derived from B cells	Blood cancers, hematopoiesis, leukemia
18108368	SPH 52.5 (Salivary Gland)	Salivary Gland	Dry mouth, infection
18108384	SPH 52.6 (Brain- Thalamus)	Thalamus	Brain cancer, head injury, obesity, neurological disorders, neuropsychiatric disorders
18108394	SPH 53.1 (Adrenal Gland)	Adrenal Gland/Suprarenal gland	Adrenoleukodystrophy , Congenital Adrenal Hyperplasia,
18108355	SPH 53.2 (Fetal Lung)	Fetal Lung	Cystic Fibrosis, infection, lung cancer
18108359	SPH 53.3 (B's Lymphoma- Raji)	Lymphoma derived from B cells	Blood cancers, hematopoiesis, leukemia
18108361	SPH 53.4 (Mammary Gland)	Mammary Gland	Lactation disorders, breast cancer
18108362	SPH 53.5 (Salivary Gland)	Salivary Gland	Dry mouth, infection
18108366	SPH 53.6 (Brain- Thalamus)	Thalamus	Brain cancer, head injury, obesity, neurological disorders, neuropsychiatric disorders
18108354	SPH 54.1 (Adrenal Gland)	Adrenal Gland/Suprarenal gland	Adrenoleukodystrophy , Congenital Adrenal Hyperplasia,
18108392	SPH 54.2 (Fetal Lung)	Fetal Lung	Cystic Fibrosis, infection, lung cancer
18108348	SPH 54.3 (B's Lymphoma- Raji)	Lymphoma derived from B cells	Blood cancers, hematopoiesis, leukemia
18108382	SPH 54.4 (Mammary Gland)	Mammary Gland	Lactation disorders, breast cancer
18108395	SPH 54.5 (Salivary Gland)	Salivary Gland	Dry mouth, infection
18108365	SPH 54.6 (Brain- Thalamus)	Thalamus	Brain cancer, head injury, obesity, neurological disorders, neuropsychiatric disorders
18108397	SPH 55.1 (Adrenal Gland)	Adrenal Gland/Suprarenal gland	Adrenoleukodystrophy , Congenital Adrenal Hyperplasia,
18108398	SPH 55.2 (Fetal Lung)	Fetal Lung	Cystic Fibrosis, infection, lung cancer
18108364	SPH 55.3 (B's Lymphoma- Raji)	Lymphoma derived from B cells	
18108388	SPH 55.4 (Mammary Gland)	Mammary Gland	Lactation disorders, breast cancer
18108358	SPH 55.5 (Salivary Gland)	Salivary Gland	Dry mouth, infection
20281099	SPH 56.2 (MG63)		
20281100	SPH 56.3 (U1SMC)		
264404	SPH.1 (Brain)	Whole Brain	Von Hippel-Lindau (VHL) syndrome , Alzheimer's disease, Stroke, Tuberosus sclerosis, hypercalcaemia, Parkinson's disease, Huntington's disease, Cerebral palsy, Epilepsy, Lesch-Nyhan syndrome, Multiple sclerosis, Ataxia-telangiectasia, Leukodystrophies, Behavioral disorders, Addiction, Anxiety, Pain, Neuroprotection

264510	SPH.10 (Pancreas)	Pancreas	Pancreatitis, diabetes, pancreatic cancer
264511	SPH.11 (Placenta)	Placenta	Infertility, birth defects
264512	SPH.12 (Thyroid)	Thyroid	Hyperparathyroidism, Hypoparathyroidism
264555	SPH.13 (Bone Marrow)	Bone Marrow	Hemophilia, hypercoagulation, Idiopathic thrombocytopenic purpura, autoimmune disease, allergies, immunodeficiencies, transplantation, Graft vesus host,
264556	SPH.14 (Bone Marrow)	Bone Marrow	Hemophilia, hypercoagulation, Idiopathic thrombocytopenic purpura, autoimmune disease, allergies, immunodeficiencies, transplantation, Graft vesus host,
264557	SPH.15 (Bone Marrow)	Bone Marrow	Hemophilia, hypercoagulation, Idiopathic thrombocytopenic purpura, autoimmune disease, allergies, immunodeficiencies, transplantation, Graft vesus host,
264558	SPH.16 (Bone Marrow)	Bone Marrow	Hemophilia, hypercoagulation, Idiopathic thrombocytopenic purpura, autoimmune disease, allergies, immunodeficiencies, transplantation, Graft vesus host,
264559	SPH.17 (Bone Marrow)	Bone Marrow	Hemophilia, hypercoagulation, Idiopathic thrombocytopenic purpura, autoimmune disease, allergies, immunodeficiencies, transplantation, Graft vesus host,
264569	SPH.19 (One Fetal tissue and two cell lines)	Mixed	
264687	SPH.19.1 (fetal thymus - CRL7046)	Fetal Thymus	Hemophilia, hypercoagulation, Idiopathic thrombocytopenic purpura, immunodeficiencies
264688	SPH.19.2 (hematopoietic stem cells - CRL2043)	Hematopoietic stem cells	Leukemia, osteoporosis, post-chemotherapeutic stem cell repopulation
264689	SPH.19.3 (osteogenic sarcoma cell lines - HTB96)	Osteogenic Sarcoma	Sarcomas, osteoporosis, osteopetrosis
264690	SPH.19.4 (Fetal Liver)	Fetal liver	Von Hippel-Lindau (VHL) syndrome, Cirrhosis, Transplantation
264691	SPH.19.5 (Heart)	Heart	Cardiomyopathy, Atherosclerosis, Hypertension, Congenital heart defects, Aortic stenosis, Atrial septal defect (ASD), Atrioventricular (A-V) canal defect, Ductus arteriosus, Pulmonary stenosis, Subaortic stenosis, Ventricular septal defect (VSD), valve diseases, Tuberous sclerosis, Scleroderma, Obesity, Transplantation
264692	SPH.19.6 (Spleen)	Spleen	Hemophilia, Hypercoagulation, Idiopathic thrombocytopenic purpura, Immunodeficiencies, Graft vesus host
264693	SPH.19.7 (Pituitary)	Pituitary	Von Hippel-Lindau (VHL) syndrome, Alzheimer's disease, Stroke, Tuberous sclerosis, hypercalcaemia, Parkinson's disease, Huntington's disease, Cerebral palsy, Epilepsy, Lesch-Nyhan syndrome, Multiple sclerosis, Ataxia-telangiectasia, Leukodystrophies, Behavioral disorders, Addiction, Anxiety, Pain, Neuroprotection
264482	SPH.2 (Brain)	Brain	Von Hippel-Lindau (VHL) syndrome, Alzheimer's disease, Stroke, Tuberous sclerosis, hypercalcaemia, Parkinson's disease, Huntington's disease, Cerebral palsy, Epilepsy, Lesch-Nyhan syndrome, Multiple sclerosis, Ataxia-telangiectasia, Leukodystrophies, Behavioral disorders, Addiction, Anxiety, Pain, Neuroprotection

264600	SPH.21 (Fetal Brain)	Fetal brain	Von Hippel-Lindau (VHL) syndrome , Alzheimer's disease, Stroke, Tuberous sclerosis, hypercalcaemia, Parkinson's disease, Huntington's disease, Cerebral palsy, Epilepsy, Lesch-Nyhan syndrome, Multiple sclerosis, Ataxia-telangiectasia, Leukodystrophies, Behavioral disorders, Addiction, Anxiety, Pain, Neuroprotection
264601	SPH.22 (Bone Marrow)	Bone Marrow	Hemophilia, hypercoagulation, Idiopathic thrombocytopenic purpura, autoimmune disease, allergies, immunodeficiencies, transplantation, Graft versus host,
264602	SPH.23 (Thyroid)	Thyroid	Hyperthyroidism and Hypothyroidism
264603	SPH.24 (Pancreas)	Pancreas	Pancreatitis, diabetes, pancreatic cancer
264604	SPH.25 (Lymph Node)	Lymph Node	Lymphedema , Allergies
264605	SPH.26 (Placenta)	Placenta	Infertility, birth defects
264634	SPH.28 (Heart)	Heart	Cardiomyopathy, Atherosclerosis, Hypertension, Congenital heart defects, Aortic stenosis, Atrial septal defect (ASD), Atrioventricular (A-V) canal defect, Ductus arteriosus , Pulmonary stenosis , Subaortic stenosis, Ventricular septal defect (VSD), valve diseases, Tuberous sclerosis, Scleroderma, Obesity, Transplantation
264635	SPH.29 (Fetal Kidney)	Fetal Kidney	Diabetes, Autoimmune disease, Renal artery stenosis, Interstitial nephritis, Glomerulonephritis, Polycystic kidney disease, Systemic lupus erythematosus, Renal tubular acidosis, IgA nephropathy, Hypercalcaemia, Lesch-Nyhan syndrome
264483	SPH.3 (Bone Marrow)	Bone marrow	Hemophilia, hypercoagulation, Idiopathic thrombocytopenic purpura, autoimmune disease, allergies, immunodeficiencies, transplantation, Graft versus host,
264636	SPH.30 (Lymph Node)	Lymph Node	Lymphedema , Allergies
264637	SPH.31 (Pancreas)	Pancreas	Pancreatitis, diabetes, pancreatic cancer
264638	SPH.32 (Thyroid)	Thyroid	Hyperthyroidism and Hypothyroidism
264639	SPH.33 (Fetal Brain)	Fetal brain	Von Hippel-Lindau (VHL) syndrome , Alzheimer's disease, Stroke, Tuberous sclerosis, hypercalcaemia, Parkinson's disease, Huntington's disease, Cerebral palsy, Epilepsy, Lesch-Nyhan syndrome, Multiple sclerosis, Ataxia-telangiectasia, Leukodystrophies, Behavioral disorders, Addiction, Anxiety, Pain, Neuroprotection
264484	SPH.4 (Bone Marrow)	Bone Marrow	Hemophilia, hypercoagulation, Idiopathic thrombocytopenic purpura, autoimmune disease, allergies, immunodeficiencies, transplantation, Graft versus host,
264758	SPH.44.1 (Kidney)	Kidney	Diabetes, Autoimmune disease, Renal artery stenosis, Interstitial nephritis, Glomerulonephritis, Polycystic kidney disease, Systemic lupus erythematosus, Renal tubular acidosis, IgA nephropathy, Hypercalcaemia, Lesch-Nyhan syndrome
264760	SPH.44.2 (Fetal Liver)	Fetal Liver	Von Hippel-Lindau (VHL) syndrome, Cirrhosis, Transplantation

264762	SPH.44.3 (Heart)	Heart	Cardiomyopathy, Atherosclerosis, Hypertension, Congenital heart defects, Aortic stenosis, Atrial septal defect (ASD), Atrioventricular (A-V) canal defect, Ductus arteriosus, Pulmonary stenosis, Subaortic stenosis, Ventricular septal defect (VSD), valve diseases, Tuberous sclerosis, Scleroderma, Obesity, Transplantation
264764	SPH.44.4 (Prostate)	Prostate	Prostate Cancer
264766	SPH.44.5 (Spleen)	Spleen	Hemophilia, Hypercoagulation, Idiopathic thrombocytopenic purpura, Immunodeficiencies, Graft versus host
264768	SPH.44.6 (pituitary)	Pituitary	Von Hippel-Lindau (VHL) syndrome, Alzheimer's disease, Stroke, Tuberous sclerosis, hypercalcaemia, Parkinson's disease, Huntington's disease, Cerebral palsy, Epilepsy, Lesch-Nyhan syndrome, Multiple sclerosis, Ataxia-telangiectasia, Leukodystrophies, Behavioral disorders, Addiction, Anxiety, Pain, Neuroprotection
264769	SPH.44.7 (Uterus)	Uterus	Infertility, birth defects
264905	SPH.48.1 (Burkitt's Lymphoma- Raji)	Burkitt's Lymphoma	Lymphoma, blood cancers
264906	SPH.48.2 (Thalamus- Brain)	Thalamus	Von Hippel-Lindau (VHL) syndrome, Alzheimer's disease, Stroke, Tuberous sclerosis, hypercalcaemia, Parkinson's disease, Huntington's disease, Cerebral palsy, Epilepsy, Lesch-Nyhan syndrome, Multiple sclerosis, Ataxia-telangiectasia, Leukodystrophies, Behavioral disorders, Addiction, Anxiety, Pain, Neuroprotection
264907	SPH.48.3 (Adrenal Gland)	Adrenal Gland/Suprarenal gland	Adrenoleukodystrophy, Congenital Adrenal Hyperplasia,
264908	SPH.48.4 (Fetal Lung)	Fetal Lung	Cystic Fibrosis, infection, lung cancer
264909	SPH.48.5 (Salivary Gland)	Salivary Gland	Dry mouth, infection
264910	SPH.48.6 (Mammary Gland)	Mammary Gland	Lactation disorders, breast cancer
265006	SPH.50.1 (B's lymphoma)	Burkitt's Lymphoma	Lymphoma, blood cancers
265007	SPH.50.2 (thalamus)	Thalamus	Von Hippel-Lindau (VHL) syndrome, Alzheimer's disease, Stroke, Tuberous sclerosis, hypercalcaemia, Parkinson's disease, Huntington's disease, Cerebral palsy, Epilepsy, Lesch-Nyhan syndrome, Multiple sclerosis, Ataxia-telangiectasia, Leukodystrophies, Behavioral disorders, Addiction, Anxiety, Pain, Neuroprotection
265008	SPH.50.3 (adrenal gland)	Adrenal Gland/Suprarenal gland	Adrenoleukodystrophy, Congenital Adrenal Hyperplasia,
265009	SPH.50.4 (fetal lung)	Fetal Lung	Cystic Fibrosis, infection, lung cancer
265010	SPH.50.5 (salivary gland)	Salivary Gland	Dry mouth, infection
265011	SPH.50.6 (mammary gland)	Mammary Gland	Lactation disorders, breast cancer
18108385	SPH.51.1 (MCF-7)	Breast Cancer	Breast Cancer
18108370	SPH.51.2 (CCRF-CEM)	Cancer Cell line	Cancer
18108374	SPH.51.3 (K-562)	Cancer Cell line	Cancer
18108351	SPH.51.4 (OVCAR-3)	Cancer Cell line	Ovarian cancer
18108372	SPH.51.5 (HL-60)	Cancer Cell line	Cancer
264486	SPH.6 (Bone Marrow)	Bone Marrow	Hemophilia, hypercoagulation, Idiopathic thrombocytopenic purpura, autoimmune disease, allergies, immunodeficiencies, transplantation, Graft versus host,

264508	SPH.8 (Fetal Brain)		Von Hippel-Lindau (VHL) syndrome , Alzheimer's disease, Stroke, Tuberous sclerosis, hypercalcaemia, Parkinson's disease, Huntington's disease, Cerebral palsy, Epilepsy, Lesch-Nyhan syndrome, Multiple sclerosis, Ataxia-telangiectasia, Leukodystrophies, Behavioral disorders, Addiction, Anxiety, Pain, Neuroprotection
264509	SPH.9 (Lymph Node)	Lymph Node	Lymphedema , Allergies
20798451	SRH 56.3(UtSMC)		
264487	SRH.1 (Brain)	Brain	Von Hippel-Lindau (VHL) syndrome , Alzheimer's disease, Stroke, Tuberous sclerosis, hypercalcaemia, Parkinson's disease, Huntington's disease, Cerebral palsy, Epilepsy, Lesch-Nyhan syndrome, Multiple sclerosis, Ataxia-telangiectasia, Leukodystrophies, Behavioral disorders, Addiction, Anxiety, Pain, Neuroprotection
264534	SRH.11 (Bone marrow)	Bone Marrow	Hemophilia, hypercoagulation, Idiopathic thrombocytopenic purpura, autoimmune disease, allergies, immunodeficiencies, transplantation, Graft versus host,
264535	SRH.12 (Bone marrow)	Bone Marrow	Hemophilia, hypercoagulation, Idiopathic thrombocytopenic purpura, autoimmune disease, allergies, immunodeficiencies, transplantation, Graft versus host,
264563	SRH.19 (Fetal Brain)	Fetal brain	Von Hippel-Lindau (VHL) syndrome , Alzheimer's disease, Stroke, Tuberous sclerosis, hypercalcaemia, Parkinson's disease, Huntington's disease, Cerebral palsy, Epilepsy, Lesch-Nyhan syndrome, Multiple sclerosis, Ataxia-telangiectasia, Leukodystrophies, Behavioral disorders, Addiction, Anxiety, Pain, Neuroprotection
264488	SRH.2 (Bone Marrow)	Bone Marrow	Hemophilia, hypercoagulation, Idiopathic thrombocytopenic purpura, autoimmune disease, allergies, immunodeficiencies, transplantation, Graft versus host,
264564	SRH.20 (Lymph Node)	Lymph Node	Lymphedema , Allergies
264565	SRH.21 (Pancreas)	Pancreas	Pancreatitis, diabetes, pancreatic cancer
264566	SRH.22 (Placenta)	Placenta	Infertility, birth defects
264567	SRH.23 (Thyroid)	Thyroid	Hyperthyroidism and Hypothyroidism
264591	SRH.25 (Fetal Brain)	Fetal brain	Von Hippel-Lindau (VHL) syndrome , Alzheimer's disease, Stroke, Tuberous sclerosis, hypercalcaemia, Parkinson's disease, Huntington's disease, Cerebral palsy, Epilepsy, Lesch-Nyhan syndrome, Multiple sclerosis, Ataxia-telangiectasia, Leukodystrophies, Behavioral disorders, Addiction, Anxiety, Pain, Neuroprotection
264592	SRH.26 (Bone Marrow)	Bone Marrow	Hemophilia, hypercoagulation, Idiopathic thrombocytopenic purpura, autoimmune disease, allergies, immunodeficiencies, transplantation, Graft versus host,
264593	SRH.27(thyroid)	Thyroid	Hyperthyroidism and Hypothyroidism
264594	SRH.28 (Pancreas)	Pancreas	Pancreatitis, diabetes, pancreatic cancer
264595	SRH.29 (Lymph Node)	Lymph Node	Lymphedema , Allergies
264489	SRH.3 (Bone Marrow)	Bone Marrow	Hemophilia, hypercoagulation, Idiopathic thrombocytopenic purpura, autoimmune disease, allergies, immunodeficiencies, transplantation, Graft versus host,

264596	SRH.30 (Placenta)	Placenta	Infertility, birth defects
264628	SRH.33 (fetal Kidney)	Fetal kidney	Diabetes, Autoimmune disease, Renal artery stenosis, Interstitial nephritis, Glomerulonephritis, Polycystic kidney disease, Systemic lupus erythematosus, Renal tubular acidosis, IgA nephropathy, Hypercalcaemia, Lesch-Nyhan syndrome
264629	SRH.34 (lymph Node)	Lymph Node	Lymphedema , Allergies
264630	SRH.35 (Pancreas)	Pancreas	Pancreatitis, diabetes, pancreatic cancer
264631	SRH.36 (thyroid)	Thyroid	Hyperthyroidism and Hypothyroidism
264632	SRH.37 (Fetal Brain)	Fetal Brain	Von Hippel-Lindau (VHL) syndrome , Alzheimer's disease, Stroke, Tuberous sclerosis, hypercalcaemia, Parkinson's disease, Huntington's disease, Cerebral palsy, Epilepsy, Lesch-Nyhan syndrome, Multiple sclerosis, Ataxia-telangiectasia, Leukodystrophies, Behavioral disorders, Addiction, Anxiety, Pain, Neuroprotection
264490	SRH.4 (Bone Marrow)	Bone Marrow	Hemophilia, hypercoagulation, Idiopathic thrombocytopenic purpura, autoimmune disease, allergies, immunodeficiencies, transplantation, Graft versus host,
264681	SRH.43.1 (fetal thymus - CRL7046)	Fetal Thymus	Hemophilia, hypercoagulation, Idiopathic thrombocytopenic purpura, immunodeficiencies
264682	SRH.43.2 (hematopoietic stem cells - CRL2043)	Hematopoietic stem cells	Leukemia, osteoporosis, post-chemotherapeutic stem cell repopulation
264683	SRH.43.3 (osteogenic sarcoma cell lines - HTB96)	Osteogenic Sarcoma	Sarcomas, osteoporosis, osteopetrosis
264684	SRH.43.4 (Fetal Liver)	Fetal Liver	Von Hippel-Lindau (VHL) syndrome, Cirrhosis, Transplantation
264685	SRH.43.6 (Spleen)	Spleen	Hemophilia, Hypercoagulation, Idiopathic thrombocytopenic purpura , Immunodeficiencies, Graft versus host
264686	SRH.43.7 (pituitary)	Pituitary	Von Hippel-Lindau (VHL) syndrome , Alzheimer's disease, Stroke, Tuberous sclerosis, hypercalcaemia, Parkinson's disease, Huntington's disease, Cerebral palsy, Epilepsy, Lesch-Nyhan syndrome, Multiple sclerosis, Ataxia-telangiectasia, Leukodystrophies, Behavioral disorders, Addiction, Anxiety, Pain, Neuroprotection
264757	SRH.44.1 (Kidney)	Kidney	Diabetes, Autoimmune disease, Renal artery stenosis, Interstitial nephritis, Glomerulonephritis, Polycystic kidney disease, Systemic lupus erythematosus, Renal tubular acidosis, IgA nephropathy, Hypercalcaemia, Lesch-Nyhan syndrome
264759	SRH.44.2 (Fetal Liver)	Fetal Liver	Von Hippel-Lindau (VHL) syndrome, Cirrhosis, Transplantation
264761	SRH.44.3 (Heart)	Heart	Cardiomyopathy, Atherosclerosis, Hypertension, Congenital heart defects, Aortic stenosis, Atrial septal defect (ASD), Atrioventricular (A-V) canal defect, Ductus arteriosus , Pulmonary stenosis , Subaortic stenosis, Ventricular septal defect (VSD), valve diseases, Tuberous sclerosis, Scleroderma, Obesity, Transplantation
264763	SRH.44.4 (Prostate)	Prostate	Prostate Cancer
264765	SRH.44.5 (Spleen)	Spleen	Hemophilia, Hypercoagulation, Idiopathic thrombocytopenic purpura , Immunodeficiencies, Graft versus host

264767	SRH.44.6 (Pituitary)	Pituitary	Von Hippel-Lindau (VHL) syndrome , Alzheimer's disease, Stroke, Tuberous sclerosis, hypercalcaemia, Parkinson's disease, Huntington's disease, Cerebral palsy, Epilepsy, Lesch-Nyhan syndrome, Multiple sclerosis, Ataxia-telangiectasia, Leukodystrophies, Behavioral disorders, Addiction, Anxiety, Pain, Neuroprotection
264828	SRH.46.1 (Lymph Node)	Lymph Node	Lymphedema , Allergies
264887	SRH.47.5 (Fetal Liver)	Fetal Liver	Von Hippel-Lindau (VHL) syndrome, Cirrhosis, Transplantation
18108377	SRH.50.1 (B's lymphoma)	Burkitt's Lymphoma	Lymphoma, blood cancers
18108380	SRH.50.2 (thalamus)	Thalamus	Von Hippel-Lindau (VHL) syndrome , Alzheimer's disease, Stroke, Tuberous sclerosis, hypercalcaemia, Parkinson's disease, Huntington's disease, Cerebral palsy, Epilepsy, Lesch-Nyhan syndrome, Multiple sclerosis, Ataxia-telangiectasia, Leukodystrophies, Behavioral disorders, Addiction, Anxiety, Pain, Neuroprotection
18108396	SRH.50.3 (adrenal gland)	Adrenal Gland/Suprarenal gland	Adrenoleukodystrophy , Congenital Adrenal Hyperplasia,
18108391	SRH.50.4 (fetal lung)	Fetal Lung	Airway diseases, infection
18108357	SRH.50.5 (salivary gland)	Salivary Gland	Dry mouth, infection
18108390	SRH.50.6 (mammary gland)	Mammary Gland	Lactation disorders, breast cancer
264532	SRH.9 (Bone Marrow)	Bone Marrow	Hemophilia, hypercoagulation, Idiopathic thrombocytopenic purpura, autoimmune disease, allergies, immunodeficiencies, transplantation, Graft versus host,
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263994	cDNA-ORF Selection		
264080	Mx96		
21906754	NQH 6.1 (HH729)		
22278996	NQH 6.10 (PrEC)	Endothelial cells	heart disease, cancer
22278997	NQH 6.11 (CAEC)	Endothelial cells	heart disease, cancer
22278998	NQH 6.12 (CSC)	Cancer Cell line	Cancer
22278999	NQH 6.13 (NHNPC)	Cancer Cell line	Cancer
22279000	NQH 6.14 (NHMC-RM)	Cancer Cell line	Cancer
22279002	NQH 6.15 (Hypothalamus)	Hypothalamus	Von Hippel-Lindau (VHL) syndrome , Alzheimer's disease, Stroke, Tuberous sclerosis, hypercalcaemia, Parkinson's disease, Huntington's disease, Cerebral palsy, Epilepsy, Lesch-Nyhan syndrome, Multiple sclerosis, Ataxia-telangiectasia, Leukodystrophies, Behavioral disorders, Addiction, Anxiety, Pain, Neuroprotection, Obesity
21906764	NQH 6.2 (In Dated Platelets)	Platelets	Clotting diseases, stroke
21906765	NQH 6.3 (HuVec)	Endothelial cells	heart disease, cancer
87168474	NQH 6.3 (Sized-HUVEC)	Endothelial cells	heart disease, cancer
21906766	NQH 6.4 (UMVEC- myo)	Cancer Cell line	Cancer
21906767	NQH 6.5 (NHEM-neo)	Cancer Cell line	Cancer
21906768	NQH 6.6 (NHEK)	Cancer Cell line	Cancer
21906769	NQH 6.7 (ByCAEC)	Endothelial cells	heart disease, cancer
22278994	NQH 6.8 (NHA)	Cancer Cell line	Cancer

22278995	NQH 6.9 (PrSC)	Cancer Cell line	Cancer
27486261	NQH 7.1 (Jurkat E6-untreated)	Cancer Cell line	Cancer
27486262	NQH 7.2 (TF1-untreated)	Cancer Cell line	Cancer
27486264	NQH 7.3 (U87-untreated)	Cancer Cell line	Cancer
27486265	NQH 7.4 (THP1-untreated)	Cancer Cell line	Cancer
29331822	NQH 8.1 (Brain- amygdala)		Von Hippel-Lindau (VHL) syndrome , Alzheimer's disease, Stroke, Tuberous sclerosis, hypercalcaemia, Parkinson's disease, Huntington's disease, Cerebral palsy, Epilepsy, Lesch-Nyhan syndrome, Multiple sclerosis, Ataxia-telangiectasia, Leukodystrophies, Behavioral disorders, Addiction, Anxiety, Pain, Neuroprotection
29331824	NQH 8.2 (Brain-hippocampus)		Von Hippel-Lindau (VHL) syndrome , Alzheimer's disease, Stroke, Tuberous sclerosis, hypercalcaemia, Parkinson's disease, Huntington's disease, Cerebral palsy, Epilepsy, Lesch-Nyhan syndrome, Multiple sclerosis, Ataxia-telangiectasia, Leukodystrophies, Behavioral disorders, Addiction, Anxiety, Pain, Neuroprotection
29331825	NQH 8.3 (Brain- substantia nigra)		Von Hippel-Lindau (VHL) syndrome , Alzheimer's disease, Stroke, Tuberous sclerosis, hypercalcaemia, Parkinson's disease, Huntington's disease, Cerebral palsy, Epilepsy, Lesch-Nyhan syndrome, Multiple sclerosis, Ataxia-telangiectasia, Leukodystrophies, Behavioral disorders, Addiction, Anxiety, Pain, Neuroprotection
29331826	NQH 8.4 (small intestine)	Small intestine	digestive diseases, obesity, diabetes
29331827	NQH 8.5 (Spinal cord)	Spinal chord	paralysis, neurodegenerative disorders
29331828	NQH 8.6 (stomach)	Stomach	Stomach cancer
29331830	NQH 8.7 (Trachea)	Trachea	Airway diseases, infection
87168518	NQH 9.1 (Sized-MG-63_treatment pool)		
87168559	NQH 9.2 (Sized-HEPG2 untreated)		
35695763	NQH.10.1 (MCF-7untreated)	Cancer Cell line	Cancer
35695855	NQH.10.2 (U-937_treatment pool)	Cancer Cell line	Cancer
35695917	NQH.10.3 (JAR)	Cancer Cell line	Cancer
35696052	NQH.10.4 (PA-1)	Cancer Cell line	Cancer
35696286	NQH.10.5 (CADMEC)	Endothelial cells	heart disease, cancer
35696423	NQH.10.6 (CADMEC_LA)	Endothelial cells	heart disease, cancer
52644045	NQH.11.1 (SK-PN-DW)	Cancer Cell line	Cancer
52644150	NQH.11.2 (Chorionic Villus Cells)	Chorionic villus	fertility, birth defects
52644229	NQH.11.3 (A549)	Cancer Cell line	Cancer
52644296	NQH.11.4 (U266B1)	Cancer Cell line	Cancer
52644332	NQH.11.5 (Daoy)	Cancer Cell line	Cancer
52644507	NQH.11.6 (SW1783)	Cancer Cell line	Cancer
52645080	NQH.12.1 (U-118MG)	Cancer Cell line	Cancer
52645129	NQH.12.2 (A204)	Cancer Cell line	Cancer
52645156	NQH.12.3 (T24)	Cancer Cell line	Cancer
52646317	NQH.12.4 (G-401)	Cancer Cell line	Cancer
52646365	NQH.12.5 (CaSki)	Cancer Cell line	Cancer
52646842	NQH.12.6 (SHP-77)	Cancer Cell line	Cancer

60424179	NQH.14.1 (Yale75_breast carcinoma)	Breast carcinoma	Breast Cancer
60424269	NQH.14.2 (Yale78B_ovarytumor)	Ovary tumor	Ovarian cancer
60431528	NQH.14.3 (Yale79_prostateBPH)	Prostate	Prostate Cancer
60431602	NQH.14.4 (Yale80_ProstateAdenocarcinoma)	Prostate	Prostate Cancer
60431735	NQH.14.5 (Yale86_UterineMyoma)	Uterine Myoma	Uterine Cancer
60431850	NQH.14.6 (Yale207_Myometrium)	Myometrium	Fertility
60432049	NQH.15.1 (Yale99_cervix)	Cervix	Osteoporosis, cervical cancer
60432113	NQH.15.2 (Yale45_spleenITP)		Hemophilia, Hypercoagulation, Idiopathic thrombocytopenic purpura, Immunodeficiencies, Graft versus host
60432229	NQH.15.3 (Yale16_Skin)	Skin	wound healing, melanoma
60432289	NQH.15.4 (Yale137_Parotid)		
60433356	NQH.15.5 (Yale38_SmallIntestine)	Small intestine	digestive diseases, obesity, diabetes
60433438	NQH.15.6 (Yale28_ColonAscending)	Colon	Colon cancer
65274444	NQH.17.1 (Larynx)	Larynx	Cancer
65274572	NQH.17.2 (Duodenum)	Duodenum	
65274620	NQH.17.3 (Kidney, Primary tumors)		Diabetes, Autoimmune disease, Renal artery stenosis, Interstitial nephritis, Glomerulonephritis, Polycystic kidney disease, Systemic lupus erythematosus, Renal tubular acidosis, IgA nephropathy, Hypercalcaemia, Lesch-Nyhan syndrome
65274727	NQH.17.4 (Lung Pleura, normal)	Lung	Airway diseases, infection
65274791	NQH.17.5 (Lung, Normal Adult)	Lung	Airway diseases, infection
83373044	NQH.18.230 (Pooled adrenal gland, placenta)	Adrenal Gland/Suprarenal gland	Adrenoleukodystrophy, Congenital Adrenal Hyperplasia,
85658542	NQH.18.560 (Pooled uterus, BeWo pool)	Uterus	Infertility, birth defects
33656970	NQH.9.1 (MG-63_treatment pool)	Cancer Cell line	Cancer
33657023	NQH.9.2 (HEPG2 untreated)		Von Hippel-Lindau (VHL) syndrome, Cirrhosis, Transplantation
33657084	NQH.9.3 (PC3 untreated)	Cancer Cell line	Cancer
33657109	NQH.9.4 (TF-1_TPA)	Cancer Cell line	Cancer
33657182	NQH.9.5 (TF-1_TPO)	Cancer Cell line	Cancer
33657349	NQH.9.6 (TF-1_Hemin)	Cancer Cell line	Cancer
33657402	NQH.9.7 (HFDPC)	Cancer Cell line	Cancer
264259	NQH1 (Mixture of eight adult & two fetal tissues)		
264288	NQH2 (Ten tissues plus lymphocyte control)		
264448	NQH3 (Bone Marrow)	Bone Marrow	Hemophilia, hypercoagulation, Idiopathic thrombocytopenic purpura, autoimmune disease, allergies, immunodeficiencies, transplantation, Graft versus host,
265017	NQH4.1 (lymph node)	Lymph Node	Lymphedema, Allergies

265018	NQH4.2 (fetal kidney)	Fetal Kidney	Diabetes, Autoimmune disease, Renal artery stenosis, Interstitial nephritis, Glomerulonephritis, Polycystic kidney disease, Systemic lupus erythematosus, Renal tubular acidosis, IgA nephropathy, Hypercalcaemia, Lesch-Nyhan syndrome
66712502	NQH4.2 (Sized)		
265019	NQH4.3 (pituitary gland)		Von Hippel-Lindau (VHL) syndrome, Alzheimer's disease, Stroke, Tuberous sclerosis, hypercalcaemia, Parkinson's disease, Huntington's disease, Cerebral palsy, Epilepsy, Lesch-Nyhan syndrome, Multiple sclerosis, Ataxia-telangiectasia, Leukodystrophies, Behavioral disorders, Addiction, Anxiety, Pain, Neuroprotection, Obesity
66714117	NQH4.3 (Sized)		
265020	NQH4.4 (testis)	testis	Infertility, birth defects
265021	NQH4.5 (fetal liver)	Fetal Liver	Von Hippel-Lindau (VHL) syndrome, Cirrhosis, Transplantation
265022	NQH4.6 (thyroid)	Thyroid	Hyperthyroidism and Hypothyroidism
18108376	NQH5.1 (MCF-7)	Breast cancer	Breast Cancer
18108387	NQH5.2 (CCRF-CEM)	Cancer Cell line	Cancer
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263969	Old BB5 Baits		
263975	ORFSEL		
263972	OTHER Baits		
263978	pGALORF		
264106	PPBAITS		
264088	QC-YA7		
264089	QC-YA8		
264102	Resequenced Interactors		
264369	RRH.1		
60170394	RRH.10.1 (MCF-7untreated)	Breast cancer	Breast Cancer
60170615	RRH.10.2 (U-937_treatment pool)	Cancer Cell line	Cancer
60170831	RRH.10.3 (JAR)	Cancer Cell line	Cancer
60174639	RRH.11.8 (HeLa)	Cancer Cell line	Cancer
264113	rrQEA Baits		
263973	RRQEA_B5 baits		
29146498	SRD 3.1 (SKMC)	Cancer Cell line	Cancer
29146499	SRD 3.2 (SKMC)	Cancer Cell line	Cancer
29147620	SRD 3.3 (RPTEC)	Cancer Cell line	Cancer
29148627	SRD 3.4 (HRCE)	Cancer Cell line	Cancer
29148629	SRD 3.6 (HRE)	Cancer Cell line	Cancer
29148784	SRD 3.7 (HRE)	Cancer Cell line	Cancer
55810764	SRD.7.1 (Lymph Node)	Lymph Node	Lymphedema, Allergies
55811150	SRD.7.2 (pancreas)	Pancreas	Pancreatitis, diabetes, pancreatic cancer
55811386	SRD.7.3 (Adrenal Gland)	Adrenal Gland/Suprarenal gland	Adrenoleukodystrophy, Congenital Adrenal Hyperplasia,

55811576	SRD.7.4 (Pituitary Gland)	Pituitary	Von Hippel-Lindau (VHL) syndrome , Alzheimer's disease, Stroke, Tuberous sclerosis, hypercalcaemia, Parkinson's disease, Huntington's disease, Cerebral palsy, Epilepsy, Lesch-Nyhan syndrome, Multiple sclerosis, Ataxia-telangiectasia, Leukodystrophies, Behavioral disorders, Addiction, Anxiety, Pain, Neuroprotection, Obesity
55811957	SRD.7.5 (Fetal Liver)	Fetal Liver	Von Hippel-Lindau (VHL) syndrome, Cirrhosis, Transplantation
55812038	SRD.7.6 (Fetal Kidney)	Fetal kidney	Diabetes, Autoimmune disease, Renal artery stenosis, Interstitial nephritis, Glomerulonephritis, Polycystic kidney disease, Systemic lupus erythematosus, Renal tubular acidosis, IgA nephropathy, Hypercalcaemia, Lesch-Nyhan syndrome
56181562	SRD.8.1 (Lymph Node)	Lymph Node	Lymphedema , Allergies
56181686	SRD.8.2 (Pancreas)	Pancreas	Pancreatitis, diabetes, pancreatic cancer
56182181	SRD.8.3 (Adrenal Gland)	Adrenal Gland/Suprarenal gland	Adrenoleukodystrophy , Congenital Adrenal Hyperplasia,
56182323	SRD.8.4 (Pituitary Gland)	Pituitary	Von Hippel-Lindau (VHL) syndrome , Alzheimer's disease, Stroke, Tuberous sclerosis, hypercalcaemia, Parkinson's disease, Huntington's disease, Cerebral palsy, Epilepsy, Lesch-Nyhan syndrome, Multiple sclerosis, Ataxia-telangiectasia, Leukodystrophies, Behavioral disorders, Addiction, Anxiety, Pain, Neuroprotection, Obesity
56182435	SRD.8.5 (Fetal Liver)	Fetal Liver	Von Hippel-Lindau (VHL) syndrome, Cirrhosis, Transplantation
56182575	SRD.8.6 (Fetal Kidney)		Diabetes, Autoimmune disease, Renal artery stenosis, Interstitial nephritis, Glomerulonephritis, Polycystic kidney disease, Systemic lupus erythematosus, Renal tubular acidosis, IgA nephropathy, Hypercalcaemia, Lesch-Nyhan syndrome
32833986	SRD4: HL adapter		
56526486	SRD5.1:rr fragments		
33109954	SRD5: long-RXRJ		
56994075	SRD9.1 (CS/SC)	Cancer Cell line	Cancer
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 120
 tgaatgggct ttcagtgtgg ggacagcaaa acatgcacta gggcccagag tggcagttct
 180
 cttggtgtgg agagtgcctg ccacaggcct tggccagagc ccgtgagggg gtggtgtgtg
 240
 aaaggccacc tccacgtggg taagcgtgag gacttggact tctctggcac tgagatggga
 300
 cctcctgcct gtgggagtca tctggccacc accctggggc cagtaaaggt tggagctaga
 360

agggtcgtcc tccctgactt gagctctgag ggctttgcct gccagccag agcggcaagg
 420
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 480

<210> 8
 <211> 119
 <212> PRT
 <213> Homo sapiens

<400> 8
 Met Gly Phe Gln Cys Gly Asp Ser Lys Thr Cys Thr Arg Ala Gln Ser
 1 5 10 15
 Gly Ser Ser Leu Gly Val Glu Ser Ala Cys His Arg Pro Trp Pro Glu
 20 25 30
 Pro Val Arg Glu Trp Cys Val Lys Gly His Leu His Val Gly Lys Arg
 35 40 45
 Glu Asp Leu Asp Phe Ser Gly Thr Glu Met Gly Pro Pro Ala Cys Gly
 50 55 60
 Ser His Leu Ala Thr Thr Leu Gly Pro Val Lys Val Gly Ala Arg Arg
 65 70 75 80
 Val Val Leu Pro Asp Leu Ser Ser Glu Gly Phe Ala Cys Pro Ala Arg
 85 90 95
 Ala Ala Arg His Arg Gly Pro Ser Gly Thr Pro Met Ala Thr Leu Gly
 100 105 110
 Lys Thr Gly Leu Leu Thr Arg
 115

<210> 9
 <211> 428
 <212> DNA
 <213> Homo sapiens

<400> 9
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 ctctgctgct actttacaat gatccgttct tccccctctc ctctcctggc aacagctggc
 120
 tcccagggat gctggatgac ctctttcagt ccatgttct gtgcgccctg ctgctcttct
 180
 ggctgtgcgt gtaccacggg attcgtgtcc agggagaaag aaagtgttta actttctatt
 240
 tgccataaatt cttcattgtt ggactattgt ggttggttc tgttacgcta ggaatatggc
 300
 aaacagttaa cgaattacat gatccaatgt accagtatcg agttgatacc ggaaattttc
 360
 agggaatgaa ggtcttcttc atggtggtgg cagcgggtga cattctgtac ctctgttct
 420
 tgatagtg
 428

<210> 10
 <211> 138
 <212> PRT

<213> Homo sapiens

<400> 10

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Met Arg Asp Trp Gly Ile Glu Gln Lys Trp Met Ser Val Leu Leu Pro
 1           5           10           15
Leu Leu Leu Leu Tyr Asn Asp Pro Phe Phe Pro Leu Ser Phe Leu Val
      20           25           30
Asn Ser Trp Leu Pro Gly Met Leu Asp Asp Leu Phe Gln Ser Met Phe
      35           40           45
Leu Cys Ala Leu Leu Leu Phe Trp Leu Cys Val Tyr His Gly Ile Arg
      50           55           60
Val Gln Gly Glu Arg Lys Cys Leu Thr Phe Tyr Leu Pro Lys Phe Phe
65           70           75           80
Ile Val Gly Leu Leu Trp Leu Ala Ser Val Thr Leu Gly Ile Trp Gln
      85           90           95
Thr Val Asn Glu Leu His Asp Pro Met Tyr Gln Tyr Arg Val Asp Thr
      100          105          110
Gly Asn Phe Gln Gly Met Lys Val Phe Phe Met Val Val Ala Ala Val
      115          120          125
Tyr Ile Leu Tyr Leu Leu Phe Leu Ile Val
      130          135

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<210> 11

<211> 453

<212> DNA

<213> Homo sapiens

<400> 11

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cttaagaatc gcctcactca acggtcagct tgccgaccat gcccgctga taatgccccg
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gaatgttgca ggcaaaactca agaccggtgg ccttggtgaa ggtccaggtc agctcggcgg
120
acttgccccg ctcgaccagc acgctgttgg ggtcgtcatg cttcatgccg cccatatcgc
180
catgccccat ggcgcggtgg tccatcttgc ccatgccggt ggccgtgagc atgccgctgg
240
cttgcatctt gagcatttct ttctggtgtt cggcgtgcat cgcgcacatca cccagattga
300
attcgtgcag taactggcct ttgttgacca gcacaaagcg cacggtctca ccggctttta
360
catccagagc cttggggcga aaggaaatgt cctgcagggt gacttcacag gtgcgcgtgg
420
ctttatcggc cggtgccggg tggccaaacg cgt
453

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<210> 12

<211> 130

<212> PRT

<213> Homo sapiens

<400> 12

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Met Leu Gln Ala Asn Ser Arg Pro Val Ala Leu Val Lys Val Gln Val
 1           5           10           15
Ser Ser Ala Asp Leu Pro Gly Ser Thr Ser Thr Leu Leu Gly Ser Ser

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<210> 13
<211> 2034
<212> DNA
<213> Homo sapiens
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<400> 13
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ggcgtggcca agcaggacac ggtgcgcgtg gccttctgct ccggggacct gcggctcctc
120
tgggccctac catgctggca ttttcctcca tgtgtcaaac acatgggttc agccagcgaa
180
gattccatgg gacctcctcg tgtgggacgt gtgctcccca ccacaaatgg aacgttcctt
240
gtttgcatct ggaggggttg gtggctctgc tggctggagc agcctggggc cagaggaagc
300
cgtatcaacc ggctctgcag cgcttcagcg aggggtgccct ggagtaccta gccaacctgg
360
accgagcccc agacccacg gtcaggaagg acgcctttgc caccgacatc ttcagcgctt
420
acgatgttct cttccatcag tggctgcaga gtcgagaagc caagctccgt cttgccgtgg
480
tggaggctct ggggcctatg agccatctgc tgcccagtga gaggctggaa gaggagctgc
540
ccaagctcct ccctgggatt ctgcgctctt acaagaagca cgcagagacc ttctacttgt
600
ccaagagcct gggccagatc ctcgaggcag ctgtgagtgt gggcagccgc aacttgga
660
cccagctgga tgccctcttg gctgcactgc actccagat ctgtgtgcct gtggagctct
720
caagccccct ggtgatgagt aaccagaagg aggtgctgcg ctgcttact gtgctggcct
780
gcagctcgcc tgaccgccta ctggccttcc tgctgccag gctggacacc accaatgaga
840
ggacccgcgt gggcaccttg cagggggcca aacatgtcat caactcaact gctgctcaaa
900
tggaagataa aaagcccttt atcctgtctt ccatgaggct tcctctcctg aacaccaaca
960

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gcaaggtgaa gcgggcagtg gtgcaggtga ttagcgccca tggcccacca cggctacctg
 1020
 gagcagcctg gaggtgaggc gatgatcgag taaatcgtgc agcagtgccg gctgcccccc
 1080
 gagcaggagc ctgagaagcc agggccccgc agcaaggacc ccaaggccga cagcgtgcgg
 1140
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 1200
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 1260
 ctctgcagga gcctcgtgca tctggcgag aagaggcagg aggccggggc cgacgccttc
 1320
 ctcatccagt acgacgcccc tgcgagcctc ccgtctccct atgctgtaac cggaagactg
 1380
 ttggttggtg cttccagccc ctacctaggg gacggacgtg gggcagcggc gctgcgcctc
 1440
 ctcatgtgtc tgcacccaaa cattcacctt ttgctgggtc agcattggga aacgactgtc
 1500
 ccgctgctgc tggggtacct ggatgagcac acagaagaga ccctgccaca ggaggagtgg
 1560
 gaggagaagc tgttgatggg gaggggcggg gtacggccca tcctgggcct taagggtgtg
 1620
 tctggcctgg ggggtgctgg ggtggcagag gctgggccac ctgcctcgac ctcacctcgt
 1680
 ggtttggctg gggagccaag gatcaggcag catcaaggct gaagacccca gcagccttgc
 1740
 agcggggggc ttgctgtgac aaggcaccgg ccctctagca gtcgcagccc caagcgtcgg
 1800
 gggcaacctc tcacctgcc tggtagacca actgtggcat ggctgtcccc tgagggttgg
 1860
 ctctgccgcc cccggcctcc gctggaaggc ggtctgcagc ccctgcagcc acagcacatg
 1920
 gggatgtgcc caggctccag ccagccctgt gaggggtcgg gctcccagcc cctcagtggc
 1980
 atcttggcct gcagttcctg cgagacacc tggccatcat ttctgacaac gcgt
 2034

<210> 14

<211> 222

<212> PRT

<213> Homo sapiens

<400> 14

Ile	Val	Gln	Gln	Cys	Ala	Leu	Pro	Pro	Glu	Gln	Glu	Pro	Glu	Lys	Pro
1				5					10					15	
Gly	Pro	Gly	Ser	Lys	Asp	Pro	Lys	Ala	Asp	Ser	Val	Arg	Ala	Ile	Ser
			20					25					30		
Val	Arg	Thr	Leu	Tyr	Leu	Val	Ser	Thr	Thr	Val	Asp	Arg	Met	Ser	His
		35				40					45				
Val	Leu	Trp	Pro	Tyr	Leu	Leu	Gln	Phe	Leu	Thr	Pro	Val	Arg	Phe	Thr
	50					55				60					
Gly	Ala	Leu	Thr	Pro	Leu	Cys	Arg	Ser	Leu	Val	His	Leu	Ala	Gln	Lys
65				70					75					80	
Arg	Gln	Glu	Ala	Gly	Ala	Asp	Ala	Phe	Leu	Ile	Gln	Tyr	Asp	Ala	His

```

      85      90      95
Ala Ser Leu Pro Ser Pro Tyr Ala Val Thr Gly Arg Leu Leu Val Val
      100      105      110
Ser Ser Ser Pro Tyr Leu Gly Asp Gly Arg Gly Ala Ala Leu Arg
      115      120      125
Leu Leu Ser Val Leu His Pro Asn Ile His Pro Leu Leu Gly Gln His
      130      135      140
Trp Glu Thr Thr Val Pro Leu Leu Leu Gly Tyr Leu Asp Glu His Thr
      145      150      155      160
Glu Glu Thr Leu Pro Gln Glu Glu Trp Glu Glu Lys Leu Leu Met Val
      165      170      175
Arg Ala Gly Val Arg Pro Ile Leu Gly Leu Lys Val Leu Ser Gly Leu
      180      185      190
Gly Gly Ala Gly Val Ala Glu Ala Gly Pro Pro Ala Ser Thr Ser Pro
      195      200      205
Arg Gly Leu Ala Gly Glu Pro Arg Ile Arg Gln His Gln Gly
      210      215      220

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<210> 15

<211> 363

<212> DNA

<213> Homo sapiens

<400> 15

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nacgcgttgc tggctcgcca cggcaagggc catgtcggct gcgatatctg caagccggcg
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gtgggttcga tccttgccctc gtgctggaac cagccgatca tggaccgggc gttggtgccc
120
ttgcaggaca ccaatgacac cttcatggcc aacatgcaga agaacggtac ctattcgatc
180
atcccgcgta tcgccggcgg cgagatcacc ccggacaaac tgatcgccct cggcgcgggtg
240
gcgaagaaat acgatctgta caccaagatc accggcggcc agcggatcga cctgttcggc
300
gcccagttgc acgaattgcc gcagatctgg ggcgagctgg tggatgccgg attcgagacc
360
ggt
363

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<210> 16

<211> 121

<212> PRT

<213> Homo sapiens

<400> 16

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Xaa Ala Leu Leu Ala Arg His Gly Lys Gly His Val Gly Cys Asp Ile
1      5      10      15
Cys Lys Pro Ala Val Gly Ser Ile Leu Ala Ser Cys Trp Asn Gln Pro
      20      25      30
Ile Met Asp Pro Ala Leu Val Pro Leu Gln Asp Thr Asn Asp Thr Phe
      35      40      45
Met Ala Asn Met Gln Lys Asn Gly Thr Tyr Ser Ile Ile Pro Arg Ile
      50      55      60
Ala Gly Gly Glu Ile Thr Pro Asp Lys Leu Ile Ala Leu Gly Ala Val

```

```

65              70              75              80
Ala Lys Lys Tyr Asp Leu Tyr Thr Lys Ile Thr Gly Gly Gln Arg Ile
      85              90              95
Asp Leu Phe Gly Ala Gln Leu His Glu Leu Pro Gln Ile Trp Gly Glu
      100              105              110
Leu Val Asp Ala Gly Phe Glu Thr Gly
      115              120

```

<210> 17
 <211> 682
 <212> DNA
 <213> Homo sapiens

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<400> 17
gaattccatt ttgtggagta agaggtgact ggggtatagg gtacaacca tagccatcca
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tgttcatctt tgttttgaat ataattggct agaagatata catatatcta tgtaacttcc
120
tctagcatcc tccagtatgg aggctgcatt aagactgcat gaaggagagg gagagaaggg
180
agaaacagag cagctggaca agaggacagg tatagggaat aagggagaag ccagtaaggc
240
aggaaagacc ctccgtgaca aaggggcagg gaacagaact caaacattta atggcaggta
300
acccagggtta gaatggtaaa ttgaaagggtg aatataaagg gagaatgggtg aaatgaattt
360
tttgaaatta attgctgtgt ttatagtttt tagccatgca tcggaatcac ctcaggactc
420
cactcccaat caattatata tctggggggag gaccaaggcg ttggtatttt tcagaagctc
480
cactggtgat tctgacagca cagctaggat taagaaactg atcaatggga acagcatgcc
540
tgttgcagag gagcttcctt gggaaatgtc acacacagaa catcaatctt ccttccccac
600
tcctgagatc cctcattctt tggcaccagg aacagttgca attagtaaac cctggttccc
660
tgctgtctca caaatcgcaa ga
682

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<210> 18
 <211> 110
 <212> PRT
 <213> Homo sapiens

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<400> 18
Met Asn Phe Leu Lys Leu Ile Ala Val Phe Ile Val Phe Ser His Ala
1              5              10              15
Ser Glu Ser Pro Gln Asp Ser Thr Pro Asn Gln Leu Tyr Ile Trp Gly
      20              25              30
Arg Thr Lys Ala Leu Val Phe Phe Arg Ser Ser Thr Gly Asp Ser Asp
      35              40              45
Ser Thr Ala Arg Ile Lys Lys Leu Ile Asn Gly Asn Ser Met Pro Val
      50              55              60
Ala Glu Glu Leu Pro Trp Glu Met Ser His Thr Glu His Gln Ser Ser

```

```

<400> 20
Met Gly Pro Ala Ser Leu Leu His Pro Ser Leu Gly Lys Asp His Ala
 1             5             10             15
Pro Ile Ser Thr Met Leu Ala Ser Leu Ala Val His Leu Val Thr Thr
 20             25             30
Val Cys Phe Ser Ser Ala Val Gln Ser Trp Ala Ile Arg Asn Thr Gly
 35             40             45
Pro Leu Asn Thr Ser Pro Leu Leu Ala Leu Leu Leu Trp Ser Met
 50             55             60
Gly Gly Val Gly Gly Ser Pro Val Ser Ala Pro Ala Ala Gly Ala His
65             70             75             80
Thr Thr Leu Ile Phe Gln Phe Trp Leu Trp Glu Pro Leu Pro Gln Val
 85             90             95
Ser Val Pro Gln Ala Pro Gly Leu Ser Phe Phe Tyr Cys Lys Ser Trp
100             105             110
Leu Leu Leu Trp Leu Ala Pro Arg Val Arg Cys Ser Leu Leu Ser
115             120             125
Lys Ser

```

130

<210> 21
 <211> 390
 <212> DNA
 <213> Homo sapiens

<400> 21
 gtgcgcacaa aagagcacgt tcgcaagggg aggaagagcg tgccaccggt tctgccgagc
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 tagacgcggt gcctatgggt gcggaggacc atggagtga gcgagtaaga ctagatgatg
 120
 caacaaatgt gcctgagggt gaaatggcac gagccagtgc caatgagggc atgacacctg
 180
 ttaaccacga caaataccct tctgtccttt taaatgaagc ggcccaggct tcattactgg
 240
 atacaatgac tgcttgact gatgggttca caattgagca attggagctt acacgatctc
 300
 tatgttatga aagagtatta gcacatcgat cctcatggga tcgttcagcc ctggctcaag
 360
 aattaaagca agttgtccaa ggcattccatn
 390

<210> 22
 <211> 105
 <212> PRT
 <213> Homo sapiens

<400> 22
 Met Val Ala Glu Asp His Gly Val Lys Arg Val Arg Leu Asp Asp Ala
 1 5 10 15
 Thr Asn Val Pro Glu Gly Glu Met Ala Arg Ala Ser Ala Asn Glu Gly
 20 25 30
 Met Thr Pro Val Asn His Asp Lys Tyr Pro Ser Val Leu Leu Asn Glu
 35 40 45
 Ala Ala Gln Ala Ser Leu Leu Asp Thr Met Thr Ala Cys Thr Asp Gly
 50 55 60
 Phe Thr Ile Glu Gln Leu Glu Leu Thr Arg Ser Leu Cys Tyr Glu Arg
 65 70 75 80
 Val Leu Ala His Arg Ser Ser Trp Asp Arg Ser Ala Leu Ala Gln Glu
 85 90 95
 Leu Lys Gln Val Val Gln Gly Ile His
 100 105

<210> 23
 <211> 385
 <212> DNA
 <213> Homo sapiens

<400> 23
 ntctcggagg ccgacagcct ggcgggctgg aagccctcgg tgtaccacgt gctgctcatc
 60
 ctgggcctgt tcgcctgct gctgtcctgc tgcgcctcgg ccatgtacac cagcgtggag
 120

ggctgggact acgtggactc gctctacttc tgcttcgtca ccttcagcac catcggttc
 180
 ggggacctgg tgagcagcca gcacgccgcc taccggaacc aggggctcta ccgectgggc
 240
 aacttcctct tcactctgct cggcgtgtgc tgcatttact cgctcttcaa cgtcatctcc
 300
 atcctcatca agcaggtgct caactggatg ctgcgcaagc tgagctgccg ctgctgcgcg
 360
 cgctgctgcc cggctcctgg cgcgc
 385

<210> 24
 <211> 128
 <212> PRT
 <213> Homo sapiens

<400> 24
 Xaa Ser Glu Ala Asp Ser Leu Ala Gly Trp Lys Pro Ser Val Tyr His
 1 5 10 15
 Val Leu Leu Ile Leu Gly Leu Phe Ala Val Leu Leu Ser Cys Cys Ala
 20 25 30
 Ser Ala Met Tyr Thr Ser Val Glu Gly Trp Asp Tyr Val Asp Ser Leu
 35 40 45
 Tyr Phe Cys Phe Val Thr Phe Ser Thr Ile Gly Phe Gly Asp Leu Val
 50 55 60
 Ser Ser Gln His Ala Ala Tyr Arg Asn Gln Gly Leu Tyr Arg Leu Gly
 65 70 75 80
 Asn Phe Leu Phe Ile Leu Leu Gly Val Cys Cys Ile Tyr Ser Leu Phe
 85 90 95
 Asn Val Ile Ser Ile Leu Ile Lys Gln Val Leu Asn Trp Met Leu Arg
 100 105 110
 Lys Leu Ser Cys Arg Cys Cys Ala Arg Cys Cys Pro Ala Pro Gly Ala
 115 120 125

<210> 25
 <211> 337
 <212> DNA
 <213> Homo sapiens

<400> 25
 ccatgggaga gaccgtgcat tttcttctag gtctgcgtgg gaagtcactg cagagtttcg
 60
 aggaggggag ttcccagctc tgtatttttg aagggtcagt cttgttgctt ggaccagtga
 120
 ggagccccgt gggatccaga ctcgagtggg tggagccggg gcaggtggga gcagagacac
 180
 tggaggaaag ctggtcgaat gcactgtgta tttggaggca gaaccagcag agggctctct
 240
 gggttgagtg tagggcaaaa gagaaagaag gcaccaagcc tggggtcttg gttttctctc
 300
 ttacacttgc tgggtggacg gtggtgccac tgaatga
 337

<210> 26

<211> 111
 <212> PRT
 <213> Homo sapiens

<400> 26
 Met Gly Glu Thr Val His Phe Leu Leu Gly Leu Arg Gly Lys Ser Leu
 1 5 10 15
 Gln Ser Phe Glu Gly Ser Ser Gln Leu Cys Ile Phe Glu Gly Ser
 20 25 30
 Val Leu Leu Glu Gly Pro Val Arg Ser Pro Val Gly Ser Arg Leu Glu
 35 40 45
 Trp Val Glu Pro Gly Gln Val Gly Ala Glu Thr Leu Glu Glu Ser Trp
 50 55 60
 Ser Asn Ala Leu Cys Ile Trp Arg Gln Asn Gln Gln Arg Val Leu Trp
 65 70 75 80
 Val Glu Cys Arg Ala Lys Glu Lys Glu Gly Thr Lys Pro Gly Val Trp
 85 90 95
 Val Phe Ser Leu Thr Leu Ala Gly Trp Thr Val Val Pro Leu Asn
 100 105 110

<210> 27
 <211> 333
 <212> DNA
 <213> Homo sapiens

<400> 27
 ccgacgtcga atatccatgc agccgcgccg aggatggaga gagcgatgga gcaactcaac
 60
 cgcttgacgc gctcgctgcg ccgcgcgcgc accgtggagt tgcccaggga taatgaaact
 120
 gctgtttata cattaatgcc aatggttatg gctgatcaac acaggtctgt ttctgaacta
 180
 ctatcaaatt caaaatttga tgtcaattat gcattcggac gtgtgaaaag aagcttgctt
 240
 cacattgcag caaattgtgg atcggtgga tgcttggttt tgctgttaaa gaaaggagca
 300
 aatcctaact atcaagatat ttcaggtgtg aca
 333

<210> 28
 <211> 111
 <212> PRT
 <213> Homo sapiens

<400> 28
 Pro Thr Ser Asn Ile His Ala Ala Ala Pro Arg Met Glu Arg Ala Met
 1 5 10 15
 Glu Gln Leu Asn Arg Leu Thr Arg Ser Leu Arg Arg Ala Arg Thr Val
 20 25 30
 Glu Leu Pro Glu Asp Asn Glu Thr Ala Val Tyr Thr Leu Met Pro Met
 35 40 45
 Val Met Ala Asp Gln His Arg Ser Val Ser Glu Leu Leu Ser Asn Ser
 50 55 60
 Lys Phe Asp Val Asn Tyr Ala Phe Gly Arg Val Lys Arg Ser Leu Leu

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<210> 31
<211> 375
<212> DNA
<213> Homo sapiens
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<400> 31

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 120
 agattcctgg atccagagct gcggctgggc ggctgcagct gcgcctggga gtgcagggct
 180
 cccgcctgc cagctcaaaa ggaaatgggg gctcctgcct gttcctggct cctgttggcc
 240
 ctgcagagtg cacaaacctt gccgcgttc ctccactgca gcttacgtct ttgcagcagc
 300
 cactcccgat gggctgccac tgccatctgt gagaccataa tgtgtgcaat ttgagactca
 360
 tggcctgcat tgttt
 375

<210> 32

<211> 118

<212> PRT

<213> Homo sapiens

<400> 32

Met	Gln	Ala	Met	Ser	Leu	Lys	Leu	His	Thr	Leu	Trp	Ser	His	Arg	Trp
1				5					10					15	
Gln	Trp	Gln	Pro	Ile	Gly	Ser	Gly	Cys	Cys	Lys	Asp	Val	Ser	Cys	Ser
			20					25					30		
Gly	Gly	Ser	Ala	Ala	Arg	Phe	Val	His	Ser	Ala	Gly	Pro	Thr	Gly	Ala
		35					40					45			
Arg	Asn	Arg	Gln	Glu	Pro	Pro	Phe	Pro	Phe	Glu	Leu	Ala	Gly	Arg	Glu
	50					55				60					
Pro	Cys	Thr	Pro	Arg	Arg	Ser	Cys	Ser	Arg	Pro	Ala	Ala	Ala	Leu	Asp
65				70					75					80	
Pro	Gly	Ile	Ser	Ala	Leu	Ser	Gly	Ala	Gln	Glu	Ala	Ser	Leu	Thr	Arg
			85						90				95		
Arg	Leu	Val	Ser	Ala	Cys	Ser	Arg	Ser	Ser	Pro	Leu	Leu	Ala	Pro	Thr
			100					105					110		
Ser	Ile	Ser	Glu	Gln	Ser										
			115												

<210> 33

<211> 351

<212> DNA

<213> Homo sapiens

<400> 33

ccatgcagcc caaccgttgg cgataaagtc cgtttaggcg ataccaattt atgggcaacc
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 attgaacaag atttattaac caaaggatgat gagggtgaaat ttgggtggcg taaaagtgtg
 120
 cgtgatggta tggcgcaaag cggcaccgca actcgcgaca atccaaatgt attggatttt
 180
 gtgattacca atgtgatgat cattgatgcc aaattaggca ttatcaaagc cgatattggt
 240

attcgcgatg gtcgtattgt cggatcggga caagcaggta accctgacac catggatgac
 300
 gtcacgccaa acatgattat cgggtgctagc acagaagtac ataacggtgc a
 351

<210> 34
 <211> 117
 <212> PRT
 <213> Homo sapiens

<400> 34
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 1 5 10 15
 Leu Trp Ala Thr Ile Glu Gln Asp Leu Leu Thr Lys Gly Asp Glu Cys
 20 25 30
 Lys Phe Gly Gly Gly Lys Ser Val Arg Asp Gly Met Ala Gln Ser Gly
 35 40 45
 Thr Ala Thr Arg Asp Asn Pro Asn Val Leu Asp Phe Val Ile Thr Asn
 50 55 60
 Val Met Ile Ile Asp Ala Lys Leu Gly Ile Ile Lys Ala Asp Ile Gly
 65 70 75 80
 Ile Arg Asp Gly Arg Ile Val Gly Ile Gly Gln Ala Gly Asn Pro Asp
 85 90 95
 Thr Met Asp Asp Val Thr Pro Asn Met Ile Ile Gly Ala Ser Thr Glu
 100 105 110
 Val His Asn Gly Ala
 115

<210> 35
 <211> 355
 <212> DNA
 <213> Homo sapiens

<400> 35
 nngctagctg caccaccacc tgttcattgca ggcagagcgg ccaccctca tggaagaaga
 60
 ggaatccact gtattgggca caggttccct gctggacctt ggcaagcagg tgcttggtg
 120
 gtaccaggaa gtccagcgtg tacctcagtg cgtcctcccg ataagtcctc tccaccacct
 180
 ggaacacctg gcccaacagg gtgggggctg ttgcctcaaa ggggtggatac agggcggcga
 240
 gagtgtctg cacacagtc tccactggct caggctccat ggctcggcgc cgggcccgt
 300
 ccgacgcttg gtcggggcgg cggggccggg cgcgccaccg cctcccttca cgcgt
 355

<210> 36
 <211> 118
 <212> PRT
 <213> Homo sapiens

<400> 36
 Xaa Leu Ala Ala Pro Pro Pro Val His Ala Gly Arg Ala Ala Thr Pro

```

      1           5           10           15
His Gly Arg Arg Gly Ile His Cys Ile Gly His Arg Leu Pro Ala Gly
      20           25           30
Pro Trp Gln Ala Gly Ala Trp Leu Val Pro Gly Ser Pro Ala Cys Thr
      35           40           45
Ser Val Arg Pro Pro Asp Lys Ser Ser Pro Pro Pro Gly Thr Pro Gly
      50           55           60
Pro Thr Gly Trp Gly Leu Leu Pro Gln Arg Val Asp Thr Gly Arg Arg
      65           70           75           80
Glu Cys Ser Ala His Ser Pro Pro Leu Ala Gln Ala Pro Trp Leu Gly
      85           90           95
Ala Gly Pro Arg Pro Thr Leu Gly Arg Ala Gly Gly Ala Gly Arg Ala
      100          105          110
Thr Ala Ser Leu His Ala
      115

```

<210> 37
 <211> 492
 <212> DNA
 <213> Homo sapiens

```

<400> 37
acgcgtggcc ttcgtctgcc accaggaccg actcagcccc accgggtttc cggacccgcc
60
gcaaccatga caagggcgat gttgtgatct ggggtggattc cttctccgac atgctcgagg
120
gatcggatct ctccggcgga gtcacgggtg ttgccgaggc cggctatcgc ccacgggtcc
180
tcgccgaaga cgtctgctgc gggttgacgt ggatcactac cggtcagctc gacggtgctc
240
ggcgtcggct gcgcgctggt ctgcacgtgc tggcaccctc gtcagacgcc agcgtcccag
300
tcgttgggct agagccgtcc tgcactaccg tctggcggtga tgacgcactc cgcctcctgc
360
cagatgatcc gcgcgtccac cgggtagcca gaaacatgca taccgtcgcc gagatgcttg
420
aggcagcaca gtggacccca ccctcgctag caggccacac cctcgtcgct cagcccccatt
480
gtcatcccgc gg
492

```

<210> 38
 <211> 127
 <212> PRT
 <213> Homo sapiens

```

<400> 38
Met Leu Glu Gly Ser Asp Leu Ser Ala Val Val Thr Val Leu Ala Glu
      1           5           10           15
Ala Gly Tyr Arg Pro Arg Val Leu Ala Asp Asp Val Cys Cys Gly Leu
      20           25           30
Thr Trp Ile Thr Thr Gly Gln Leu Asp Gly Ala Arg Arg Arg Leu Arg
      35           40           45
Ala Gly Leu Asp Val Leu Ala Pro Leu Ser Asp Ala Ser Val Pro Val

```

```

      50              55              60
Val Gly Leu Glu Pro Ser Cys Thr Thr Val Trp Arg Asp Asp Ala Leu
65              70              75              80
Arg Leu Leu Pro Asp Asp Pro Arg Val His Arg Val Ala Arg Asn Met
      85              90              95
His Thr Val Ala Glu Met Leu Glu Ala Ala Gln Trp Thr Pro Pro Ser
      100             105             110
Leu Ala Gly His Thr Leu Val Ala Gln Pro His Cys His Pro Ala
      115             120             125

```

<210> 39
 <211> 412
 <212> DNA
 <213> Homo sapiens

```

<400> 39
aacgaaggtn ccgtacgcgc tctgaaagcc ctgcgttaaag agcggtccga tcgccgggaa
60
gtgatngca ccgcaaaat gcaggtggtc gaagccgcga gttcaggcaa gattgtcttt
120
gaaatggaag acgtttatta cagcattgcc ggaaaacaac tggtagagcaa cttctctgcg
180
caagtcatgc gtggtgataa aattgcgctg attggcccga acggttgtgg taaaacgacg
240
ttgctgaaac tgatgttaag taagattcag gcagacagcg gccgtgttca ctgcggtact
300
aaactggaag ttgcgtactt cgaccagcac cgtgctgagc tggatcctga gcgtacgggtg
360
atggataacc tggccgaagg taagcaggaa gtgatggtaa atggccgtgt an
412

```

<210> 40
 <211> 137
 <212> PRT
 <213> Homo sapiens

```

<400> 40
Asn Glu Gly Xaa Val Arg Ala Leu Lys Ala Leu Arg Lys Glu Arg Ser
1      5      10      15
Asp Arg Arg Glu Val Met Xaa Thr Ala Lys Met Gln Val Val Glu Ala
20     25     30
Ala Ser Ser Gly Lys Ile Val Phe Glu Met Glu Asp Val Tyr Tyr Ser
35     40     45
Ile Ala Gly Lys Gln Leu Val Ser Asn Phe Ser Ala Gln Val Met Arg
50     55     60
Gly Asp Lys Ile Ala Leu Ile Gly Pro Asn Gly Cys Gly Lys Thr Thr
65     70     75     80
Leu Leu Lys Leu Met Leu Ser Lys Ile Gln Ala Asp Ser Gly Arg Val
85     90     95
His Cys Gly Thr Lys Leu Glu Val Ala Tyr Phe Asp Gln His Arg Ala
100    105    110
Glu Leu Asp Pro Glu Arg Thr Val Met Asp Asn Leu Ala Glu Gly Lys
115    120    125
Gln Glu Val Met Val Asn Gly Arg Val

```

130

135

<210> 41
 <211> 1080
 <212> DNA
 <213> Homo sapiens

<400> 41
 gaattcaagt ggacacaggc tccacgcccg cgtctcaccg ataagagcta caagcacaac
 60
 tactatgacg agcggggttc gtcgaagag cgtcttgagc gcaactgtggc taaggatttc
 120
 gtcacgacgg aggtcgagcc catgtgggat gcggtgatg tcatgaggat gggtaggat
 180
 ctcttcatcc agcacggtct gacgacaaat cggaagtcaa tggagtgggt taagcgttac
 240
 taccctcgatt tccgcgttca cgcgggtgaat ttccctgggg atccgtaccc gatccatata
 300
 gacgcgacct ttgtgccgct tcgtccgggg ctcatcatca acaaccgaa tcgtccactg
 360
 ccgcaggagc agaggaagat ctcgaggcc aatgactggc agatcggtga tgctgctcag
 420
 ccggcgacac acacgcctcc agaattgtgc tactcgtctg tgggctatc aatgaactgc
 480
 ttggtacttg atccgaagac ggtcatctgc gaggttcgg aagttcatca gatggagcag
 540
 atggacaagc tgggtatgaa cgtcatcccg gtcgccttcc gtgacgcgta cccattcggg
 600
 ggagggtctcc actgcgccac agctgatgta tatcgcgaa gtacctgtga ggactacttc
 660
 ccgaatcagg tcgacgaccc gaccttgggt tgagaaaacc ccgtgggtcat gtcatgactg
 720
 acggatctcg gtggctcggg acggaactta cgttgtccgt taccgggccg ccgggtctga
 780
 tatggcagta tcacgcctag caaaaaggag catgtcatgg acatggagcc gggcatcatc
 840
 aacgtcaaac aggaagttcc aggcgtcggg acgatgaacc agaaagtggg attcgtgtcc
 900
 atgcttcttt ctgcaacggg tatgggggtg gtgggtactt tcgggcgtct cagcactcct
 960
 gtggatccca cgacgggcag taagtacatc atcggtgatt ttttgccac tggtaggatg
 1020
 atagtcgggg tcctgggatt tctgcttatt atcgtcatatc ttggaaaatg gtctgagctc
 1080

<210> 42
 <211> 230
 <212> PRT
 <213> Homo sapiens

<400> 42
 Glu Phe Lys Trp Thr Gln Ala Pro Arg Pro Arg Leu Thr Asp Lys Ser
 1 5 10 15
 Tyr Lys His Asn Tyr Tyr Asp Glu Arg Val Ser Leu Glu Glu Arg Leu

20 25 30
 Glu Arg Thr Val Ala Lys Asp Phe Val Thr Thr Glu Val Glu Pro Met
 35 40 45
 Trp Asp Ala Ala Asp Val Met Arg Met Gly Lys Asp Leu Phe Ile Gln
 50 55 60
 His Gly Leu Thr Thr Asn Arg Lys Ser Met Glu Trp Phe Lys Arg Tyr
 65 70 75 80
 Tyr Pro Asp Phe Arg Val His Ala Val Asn Phe Pro Gly Asp Pro Tyr
 85 90 95
 Pro Ile His Ile Asp Ala Thr Phe Val Pro Leu Arg Pro Gly Leu Ile
 100 105 110
 Ile Asn Asn Pro Asn Arg Pro Leu Pro Gln Glu Gln Arg Lys Ile Phe
 115 120 125
 Glu Ala Asn Asp Trp Gln Ile Val Asp Ala Ala Gln Pro Ala His Asp
 130 135 140
 Thr Pro Pro Glu Leu Cys Tyr Ser Ser Val Trp Leu Ser Met Asn Cys
 145 150 155 160
 Leu Val Leu Asp Pro Lys Thr Val Ile Cys Glu Ala Ser Glu Val His
 165 170 175
 Gln Met Glu Gln Met Asp Lys Leu Gly Met Asn Val Ile Pro Val Ala
 180 185 190
 Phe Arg Asp Ala Tyr Pro Phe Gly Gly Gly Leu His Cys Ala Thr Ala
 195 200 205
 Asp Val Tyr Arg Glu Gly Thr Cys Glu Asp Tyr Phe Pro Asn Gln Val
 210 215 220
 Asp Asp Pro Thr Leu Val
 225 230

<210> 43
 <211> 358
 <212> DNA
 <213> Homo sapiens

<400> 43
 gggcccccca catagtggac acaggtttct gggatgtcag catggagtgc caagaggtgg
 60
 gtgaccacct ggtggggaat aaggcgcttc tgggacatag aggtgcctt ccagctgcgc
 120
 ctggcagagc tgttgacaca acagcatggt ctgcagtgcc gggccactgc cagcacacc
 180
 gatgtccttt aaggatggat ttgggttttc ggattcgcgt ggcctatcag cgggagtcct
 240
 agatcctgaa ggaagtgcag agcccagagg ggatgatctc gctgagggac acagctgcct
 300
 ccctccgctt tgagagagac acaaggcagt tgccactgct caccagtgcc ctgcacgn
 358

<210> 44
 <211> 105
 <212> PRT
 <213> Homo sapiens

<400> 44
 Met Glu Cys Gln Glu Val Gly Asp His Leu Val Gly Asn Lys Ala Leu

```

      1           5           10           15
Leu Gly His Arg Gly Cys Leu Pro Ala Ala Pro Gly Arg Ala Val Asp
      20           25           30
Thr Thr Ala Trp Ser Ala Val Pro Gly His Cys His Ala His Arg Cys
      35           40           45
Pro Leu Arg Met Asp Leu Gly Phe Arg Ile Arg Val Ala Tyr Gln Arg
      50           55           60
Glu Ser Gln Ile Leu Lys Glu Val Gln Ser Pro Glu Gly Met Ile Ser
      65           70           75           80
Leu Arg Asp Thr Ala Ala Ser Leu Arg Leu Glu Arg Asp Thr Arg Gln
      85           90           95
Leu Pro Leu Leu Thr Ser Ala Leu His
      100           105

```

<210> 45

<211> 905

<212> DNA

<213> Homo sapiens

<400> 45

```

gtcgcacgata aaggagtatt tgcgcagcag cagtatgatg ctctcgttga ggcgggtttc
60
gcggtctcctg gaatcccaga gcagtatggg ggcgcagggtg cggatgcgat tgcgtccgca
120
ataatcatgg aagaggctgc tgcagtcctgt gcgtcgtcgt ccaccgtcat atcgtccaat
180
gagcttggtgta ccgtccctct cctcaaatac ggtagcggagg agcagaggaa acgttatctt
240
tctgaagttg cttcgggtaa ggcacttttc ggatatgcgc tctccgaggc tgatgctgga
300
tcagatccag ctgcacttaa gtgtcgagcc gacgaagatg gggacagttt cgtcctgaat
360
ggcggttaagg cttgggtcac ggaggctggc gaggccaagt acctgggtgat atttgcggtt
420
actgaccag acgatccgcg ccacagaatc agcgcgttga tgggtccatgc agatgaccg
480
ggcattagct acggggctcc ggagcacaaa atggggatac gcgggtcagt taccagggaa
540
gtgggttttca agaatacgcg tatccccaag gaacgagtaa ttggccgtcg agggcacggt
600
ctgagtgttg ctctaggtac gcttgataac tctcgtgtct cgattgctgc tcaagcagt
660
ggaattgccc aaggagcttt agacattgcc acggattacg tccagaagcg caagcagttt
720
ggccagccac tgtccaattt tgaggaatc cagttcatgc tcgcagacat ggcaatgcgt
780
ttggaggcgg cgcgagcgt gacatactct gcagctgac gtagtgggcg ccagactgac
840
gatgtgagtt acttcggcgc ggcggccaaa tgtttcgctt ccgacacagc gatggcagtg
900
tgcac
905

```

<210> 46

<211> 301
 <212> PRT
 <213> Homo sapiens

<400> 46
 Val Asp Asp Lys Gly Val Phe Ala Gln Gln Gln Tyr Asp Ala Leu Val
 1 5 10 15
 Glu Ala Gly Phe Ala Ala Pro Gly Ile Pro Glu Gln Tyr Gly Gly Asp
 20 25 30
 Gly Ala Asp Ala Ile Ala Ser Ala Ile Ile Met Glu Glu Val Ala Arg
 35 40 45
 Val Cys Ala Ser Ser Ser Thr Val Ile Ser Ser Asn Glu Leu Gly Thr
 50 55 60
 Val Pro Leu Leu Lys Tyr Gly Ser Glu Glu Gln Arg Lys Arg Tyr Leu
 65 70 75 80
 Ser Glu Val Ala Ser Gly Lys Ala Leu Phe Gly Tyr Ala Leu Ser Glu
 85 90 95
 Ala Asp Ala Gly Ser Asp Pro Ala Ala Leu Lys Cys Arg Ala Asp Glu
 100 105 110
 Asp Gly Asp Ser Phe Val Leu Asn Gly Val Lys Ala Trp Val Thr Glu
 115 120 125
 Ala Gly Glu Ala Lys Tyr Leu Val Ile Phe Ala Val Thr Asp Pro Asp
 130 135 140
 Asp Pro Arg His Arg Ile Ser Ala Leu Met Val His Ala Asp Asp Pro
 145 150 155 160
 Gly Ile Ser Tyr Gly Ala Pro Glu His Lys Met Gly Ile Arg Gly Ser
 165 170 175
 Val Thr Arg Glu Val Val Phe Lys Asn Thr Arg Ile Pro Lys Glu Arg
 180 185 190
 Val Ile Gly Arg Arg Gly His Gly Leu Ser Val Ala Leu Gly Thr Leu
 195 200 205
 Asp Asn Ser Arg Val Ser Ile Ala Ala Gln Ala Val Gly Ile Ala Gln
 210 215 220
 Gly Ala Leu Asp Ile Ala Thr Asp Tyr Val Gln Lys Arg Lys Gln Phe
 225 230 235 240
 Gly Gln Pro Leu Ser Asn Phe Glu Gly Ile Gln Phe Met Leu Ala Asp
 245 250 255
 Met Ala Met Arg Leu Glu Ala Ala Arg Ala Leu Thr Tyr Ser Ala Ala
 260 265 270
 Asp Arg Ser Gly Arg Gln Thr Asp Val Ser Tyr Phe Gly Ala Ala
 275 280 285
 Ala Lys Cys Phe Ala Ser Asp Thr Ala Met Ala Val Cys
 290 295 300

<210> 47
 <211> 379
 <212> DNA
 <213> Homo sapiens

<400> 47
 aagctttag agctagtccg aagcggactg tcggtacgcc aagctgctaa aagatgtggg
 60
 atgcatttta ccgctgcgta tgccgtagct acggaagctg ggtgccatat ccggttaagt
 120

cagtatgctc ggaaagtccg ccagacgcag ttaagagtgg aatacctgcg ccttcggctg
 180
 gcgagcctgc ctggtggtga tgctggcgcg gcagtaggaa ttgatcgtcg actgcgttta
 240
 gatttcgaaa aaggactcac caaatcccag ggtcgacgag aagagttcat acccgtcggc
 300
 gaagacgcca gcacgtataa cagacttatg aaagcgctgc gccaacgcca tgatgtcatc
 360
 aaatccggaa agcttgccc
 379

<210> 48
 <211> 106
 <212> PRT
 <213> Homo sapiens

<400> 48
 Met His Leu Thr Ala Ala Tyr Ala Val Ala Thr Glu Ala Gly Cys His
 1 5 10 15
 Ile Arg Leu Ser Gln Tyr Ala Arg Lys Val Arg Gln Thr Gln Leu Arg
 20 25 30
 Val Glu Tyr Leu Arg Leu Arg Leu Ala Ser Leu Pro Gly Gly Asp Ala
 35 40 45
 Gly Ala Ala Val Gly Ile Asp Arg Arg Leu Arg Leu Asp Phe Glu Lys
 50 55 60
 Gly Leu Thr Lys Ser Gln Gly Arg Arg Glu Glu Phe Ile Pro Val Gly
 65 70 75 80
 Glu Asp Ala Ser Thr Tyr Asn Arg Leu Met Lys Ala Leu Arg Gln Arg
 85 90 95
 His Asp Val Ile Lys Ser Gly Lys Leu Ala
 100 105

<210> 49
 <211> 309
 <212> DNA
 <213> Homo sapiens

<400> 49
 tgatcatgat gctggcatgg actattctgg tcctgttcc tctctcacct gctgaaggac
 60
 atccctctaa tttttgtgct tccttctgta tcatcaaatt ttccctctct actgagtctc
 120
 ttgcatctcc ttggaagcat gctgtactat gtcccatcct taaagaactc cccttgtctg
 180
 cacattaccc tctgccagct ggctcatttt tctgctcccc ttacagggga aactcttcaa
 240
 aaagttatct ccacctcctt ccattctcatg ttctcttgaa cctgcagtac tgggtgctcc
 300
 ctctttttg
 309

<210> 50
 <211> 101
 <212> PRT

<213> Homo sapiens

<400> 50

```

Met Met Leu Ala Trp Thr Ile Leu Val Pro Val Pro Leu Ser Pro Ala
 1           5           10           15
Glu Gly His Pro Ser Asn Phe Cys Val Ser Phe Cys Ile Ile Lys Phe
          20           25           30
Ser Leu Ser Thr Glu Ser Leu Ala Ser Pro Trp Lys His Ala Val Leu
      35           40           45
Cys Pro Ile Leu Lys Glu Leu Pro Leu Ser Ala His Tyr Pro Leu Pro
      50           55           60
Ala Gly Ser Phe Phe Cys Ser Pro Leu Gln Gly Asn Ser Ser Lys Ser
65           70           75           80
Tyr Leu His Leu Leu Pro Ser His Val Leu Leu Asn Leu Gln Tyr Trp
          85           90           95
Val Leu Pro Pro Phe
          100

```

<210> 51

<211> 512

<212> DNA

<213> Homo sapiens

<400> 51

```

agaatcttga agaattgcca cactgtcttc ctccctgctt ataatttctt tattccctag
60
gatgtgatcc ttgttcttgg ggcctcacat ggcagctgga tctctggcga ttgcatctga
120
gttcagaca ccaggatgga aaagaaaaga aggaggggca agaggaaccc ccagatgctc
180
cttaagagct actgcgtggc attcccactt gcatctcatt tgctcgatcg ctgtcactgt
240
gccctaacga gctgcaagga cactggggaa atgagtctgt cttgtacttc atgtgccctt
300
caaaatcttc tgttgctgag ggagaagagg ccagccggtg ttgaggaaca actagcactt
360
tctgtctccg cgtcccaggg ggacgtgggt gtgttgaatc cacaccgggg gtgcggacct
420
ctgaggtcgg gctggatggg acatcaggtg ggccctctgt ttcatttatg tgacctccca
480
tcaggctctc tggttggatc ctgctttcta ga
512

```

<210> 52

<211> 125

<212> PRT

<213> Homo sapiens

<400> 52

```

Met Glu Lys Lys Arg Arg Gly Lys Arg Asn Pro Gln Met Leu Leu
 1           5           10           15
Lys Ser Tyr Cys Val Ala Phe Pro Leu Ala Ser His Leu Leu Asp Arg
      20           25           30
Cys His Cys Ala Leu Thr Ser Cys Lys Asp Thr Gly Glu Met Ser Leu

```

```

          35          40          45
Ser Cys Thr Ser Cys Ala Pro Gln Asn Leu Leu Leu Leu Arg Glu Lys
          50          55          60
Arg Pro Ala Gly Ile Glu Glu Gln Leu Ala Leu Ser Ala Ser Ala Ser
65          70          75          80
Gln Gly Asp Val Gly Val Leu Asn Pro His Arg Gly Cys Gly Pro Leu
          85          90          95
Arg Leu Gly Trp Met Gly His Gln Val Gly Pro Leu Phe His Leu Cys
          100          105          110
Asp Leu Pro Ser Gly Leu Leu Val Gly Ser Cys Phe Leu
          115          120          125

```

<210> 53
 <211> 474
 <212> DNA
 <213> Homo sapiens

```

<400> 53
accggtacac ctacgtcacc cgtaaaaacc gacgcaatac ccggatcgcc tcgtcctcaa
60
aaaattcgat cccgtcgtgc gtcgtcacat tgagttcaag gaggcccgct aatggccaaa
120
aagtccaaga ttgtcgccca gaagaaacgt gagaagctcg tagcccaata cgccgaaagg
180
cgcgccgaac tcaaggccat catgaagtgc ccaactgcct cattggacga acgcatggag
240
gcacgcgcta agctgtctcg cctgccgcgc gattcatccc ccgtgcggtt acgtaaccgt
300
gaccaagtcg acgggcgctc ccgcggctac gttggcaagg ccggtgtgtc ccgtatccgt
360
ttccgtgaga tggcccaccg cggcgaactc cccggaatcg cgaagtcaag ctggtgaagc
420
catggcagta ccgaagcgaa agaagtcccg ttcgaccacg cgatcataggc gggc
474

```

<210> 54
 <211> 101
 <212> PRT
 <213> Homo sapiens

```

<400> 54
Met Ala Lys Lys Ser Lys Ile Val Ala Gln Lys Lys Arg Glu Lys Leu
1          5          10          15
Val Ala Gln Tyr Ala Glu Arg Arg Ala Glu Leu Lys Ala Ile Met Lys
          20          25          30
Cys Pro Thr Ala Ser Leu Asp Glu Arg Met Glu Ala Ser Arg Lys Leu
          35          40          45
Ser Arg Leu Pro Arg Asp Ser Ser Pro Val Arg Leu Arg Asn Arg Asp
          50          55          60
Gln Val Asp Gly Arg Pro Arg Gly Tyr Val Gly Lys Ala Gly Val Ser
65          70          75          80
Arg Ile Arg Phe Arg Glu Met Ala His Arg Gly Glu Leu Pro Gly Ile
          85          90          95
Ala Lys Ser Ser Trp

```

100

<210> 55
 <211> 378
 <212> DNA
 <213> Homo sapiens

<400> 55
 ccatggccca ggacagccgg catatcggct acgactacgg tacaccggtg gcgccacagt
 60
 tcggcgagc caagcccgca gcgtgctgcc aggcgcaagc gacaaacacc ggcccgtggg
 120
 tgggtgttga ccatgtgcgt tgcacccacg acacctttct gatcgacgtc tttctcaacc
 180
 agcccgatgc caccgagcag cagggtcaatg ccgacaaccc gcactacgtc gggcgtttca
 240
 gccgcacgg catggggctg gtggatgaca agggcggttg cattaccag ggcgtatcgc
 300
 gcgcgttgaa tgcggcgcg agcaccaagg cgctgaacct gggaccgagt gacgcggcgc
 360
 agttatcggg gaggcgta
 378

<210> 56
 <211> 125
 <212> PRT
 <213> Homo sapiens

<400> 56
 Met Ala Gln Asp Ser Arg His Ile Gly Tyr Asp Tyr Gly Thr Pro Val
 1 5 10 15
 Ala Pro Gln Phe Gly Ala Ala Lys Pro Ala Ala Cys Cys Gln Ala Gln
 20 25 30
 Ala Thr Asn Thr Gly Pro Trp Val Val Phe Asp His Val Arg Cys Thr
 35 40 45
 His Asp Thr Phe Leu Ile Asp Val Phe Leu Asn Gln Pro Asp Ala Thr
 50 55 60
 Ala Gln Gln Val Asn Ala Asp Asn Pro His Tyr Val Gly Arg Phe Ser
 65 70 75 80
 Arg Ile Gly Met Gly Leu Val Asp Asp Lys Gly Arg Cys Ile Thr Gln
 85 90 95
 Gly Val Ser Arg Ala Leu Asn Ala Ala Arg Ser Thr Lys Ala Leu Asn
 100 105 110
 Leu Gly Pro Ser Asp Ala Ala Gln Leu Ser Val Arg Arg
 115 120 125

<210> 57
 <211> 388
 <212> DNA
 <213> Homo sapiens

<400> 57
 agaccacccc gacacagatc aggagtcgtc atgtccagaa agaagaaggt cggcatcctc
 60

accgcaggcg gtgattgccc cgggctcaac gccgctatcc gcggatttgg caaggctgcc
 120
 atccgccagc acgacatgga gctcatcggt attcaggacg gctttcttgg attggcggga
 180
 aaccgcacca tctcccttgg cccgcgtgcc ctctcaggca tcttgacggt cggcggggacc
 240
 atcctgggaa ctagccgtga caaggctaat cacatgatta tcgacggcga ggaacgggat
 300
 atggtcccca ccaccgtcga gaattacgag aagctggggc ttgacgcttt ggtgactttg
 360
 ggtgcggtg gcaccgcaa gaacgcgt
 388

<210> 58
 <211> 129
 <212> PRT
 <213> Homo sapiens

<400> 58
 Arg Pro Thr Arg His Arg Ser Gly Val Val Met Ser Arg Lys Lys Lys
 1 5 10 15
 Val Gly Ile Leu Thr Ala Gly Gly Asp Cys Pro Gly Leu Asn Ala Ala
 20 25 30
 Ile Arg Gly Phe Gly Lys Ala Ala Ile Arg Gln His Asp Met Glu Leu
 35 40 45
 Ile Gly Ile Gln Asp Gly Phe Leu Gly Leu Ala Gly Asn Arg Thr Ile
 50 55 60
 Ser Leu Gly Pro Arg Ala Leu Ser Gly Ile Leu Thr Val Gly Gly Thr
 65 70 75 80
 Ile Leu Gly Thr Ser Arg Asp Lys Val Asn His Met Ile Ile Asp Gly
 85 90 95
 Glu Glu Arg Asp Met Val Pro Thr Thr Val Glu Asn Tyr Glu Lys Leu
 100 105 110
 Gly Leu Asp Ala Leu Val Thr Leu Gly Gly Gly Gly Thr Ala Lys Asn
 115 120 125
 Ala

<210> 59
 <211> 417
 <212> DNA
 <213> Homo sapiens

<400> 59
 ggtaccatcg gagctcgaca agaaatggtt ggggtgaagtc gtggcttctg ctccaccag
 60
 tgccctcatg ggtcagccca cctgaatata ttcatgcctg tgcatttctc ctgatgttca
 120
 cgtgtgccct gtgtttttac gcatctgtga tcgtgcaccc acgcgtctca gagaggagcc
 180
 cgtttgggaa tccggagaat gtgcgctggc ggaagagcgt cacacactgg aagcaaacct
 240
 cagaccgcgt ggacaagacc aaggatgaaa tggaacacga ggccttggtg gaagggaacc
 300

tggcaaccga ggcaagccta gtggttctgg acacactgga gatcatcgtg cagacggtga
 360
 tgctttcaga agcccgaggag agcgtcttgg gggcagtgcg gaaggttgtg ctgtaca
 417

<210> 60
 <211> 101
 <212> PRT
 <213> Homo sapiens

<400> 60
 Met Phe Thr Cys Ala Leu Cys Phe Tyr Ala Ser Val Ile Val His Pro
 1 5 10 15
 Arg Val Ser Glu Arg Ser Pro Phe Gly Asn Pro Glu Asn Val Arg Trp
 20 25 30
 Arg Lys Ser Val Thr His Trp Lys Gln Thr Ser Asp Arg Val Asp Lys
 35 40 45
 Thr Lys Asp Glu Met Glu His Glu Ala Leu Val Glu Gly Asn Leu Ala
 50 55 60
 Thr Glu Ala Ser Leu Val Val Leu Asp Thr Leu Glu Ile Ile Val Gln
 65 70 75 80
 Thr Val Met Leu Ser Glu Ala Arg Glu Ser Val Leu Gly Ala Val Leu
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 Lys Val Val Leu Tyr
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<210> 61
 <211> 304
 <212> DNA
 <213> Homo sapiens

<400> 61
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<210> 62
 <211> 92
 <212> PRT
 <213> Homo sapiens

<400> 62
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Gly Leu Glu Arg Val Cys Gly Gly Met Tyr Phe Arg Trp Val Lys Tyr
 20 25 30
 Glu Glu Ala Gly Leu Ile Asn Thr Tyr Ser Asp Leu Asn Leu Tyr Phe
 35 40 45
 Arg Arg Gly Pro Leu Thr His Gln Gly Gly Leu Lys Asp Lys Ala Ala
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 Ser Leu Ser Ser His Glu Ser Ser Pro Arg Pro Gly Pro Trp Pro Gly
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<210> 63

<211> 577

<212> DNA

<213> Homo sapiens

<400> 63

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<210> 64

<211> 192

<212> PRT

<213> Homo sapiens

<400> 64

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 20 25 30
 Arg Ile Ser Val Gly Glu Leu Val Thr Val Val Gly Leu Ala Gln Thr
 35 40 45
 Leu Gly Pro Pro Leu Arg Ala Leu Gly Val Asp Thr Ala Thr Met Leu
 50 55 60
 Ala Thr Ala His Ala Ser Gly Asp Arg Phe Cys Glu Leu Arg Asp Ser
 65 70 75 80

Pro Ala Ala Trp Gln Ile His Pro Asp Asp Gly Ala Arg Thr Thr Pro
 85 90 95
 Gly Asp Gly Pro Val Glu Leu His Ile Pro Val Arg Asp Phe Gln Leu
 100 105 110
 Asp Val Ala Gly Gly Thr His Val Gly Ile Met Ala Pro Gln Ser Val
 115 120 125
 Cys Asp Ala Leu Ala Glu Ala Ile Asp His Gly Ser Glu Thr Val Leu
 130 135 140
 Asn Gly Val Pro Ala Ser Arg Leu Asn Pro Ala Gln Arg Arg Arg Leu
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 Val Leu Val Ala Pro Arg Ser Pro Glu Leu Phe Asp Asp Thr Ala Arg
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 Ala Asn Ile Val Leu Asp Ser Gln Thr Thr Val Ala Arg Leu Asn Ala
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<210> 65

<211> 339

<212> DNA

<213> Homo sapiens

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<210> 66

<211> 113

<212> PRT

<213> Homo sapiens

<400> 66

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 20 25 30
 Leu Val Gly Thr Met Ala Ser Glu Arg Leu Gly Val Pro Phe Gly Ile
 35 40 45
 Ile Asp Leu Ser Leu Ala Pro Thr Ala Glu Leu Gly Asp Ser Gly Ala
 50 55 60
 His Ile Leu Glu His Met Gly Leu Asp Gln Val Gly Thr His Gly Thr
 65 70 75 80
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 <211> 446
 <212> DNA
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<210> 68
 <211> 133
 <212> PRT
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<400> 68
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 Gly Ser Phe Asp Ala Asn Glu Leu Ala Val Thr Pro Asp Thr Asp Thr
 35 40 45
 Val Ile Gln Gly Val Gly Pro Ala Leu Ala Leu Leu Asp Ser Ala Trp
 50 55 60
 Gly Arg Gln Ile His Val Glu Thr Thr Gly Cys Pro Ser Ala Val Val
 65 70 75 80
 Trp Asn Pro Arg Ser Ser Ser Thr His Ala Asp Asn Pro Thr Ala Gln
 85 90 95
 Ala Trp Arg Asp Phe Val Cys Val Glu Thr Gly Ala Cys Lys Asp Asn
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<210> 69
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 <212> DNA

<213> Homo sapiens

<400> 69

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<210> 70

<211> 184

<212> PRT

<213> Homo sapiens

<400> 70

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 Gln Leu Cys Pro Arg Cys Gln Lys Ser Pro Pro Arg Leu Pro Ala Ser
 35 40 45
 Ser Pro Lys Gly Gly Ser Ser Thr Val Pro Arg Arg Ser Xaa Met Ala
 50 55 60
 Pro Ser Leu Ser Gly Ile Pro Lys Pro Gly Met Lys Ser Met Pro Gly
 65 70 75 80
 Lys Ser Pro Ser Ala Pro Ala Pro Ser Lys Glu Gly Glu Arg Ser Arg
 85 90 95
 Ser Gly Lys Leu Ser Ser Gly Leu Pro Gln Gln Lys Pro Gln Leu Asp
 100 105 110
 Gly Arg His Ser Ser Ser Ser Ser Ser Leu Ala Ser Ser Glu Gly Lys
 115 120 125
 Gly Pro Gly Gly Thr Thr Leu Asn His Ser Ile Ser Ser Gln Thr Val
 130 135 140
 Ser Gly Ser Val Gly Thr Thr Gln Thr Thr Gly Ser Asn Xaa Pro Ser
 145 150 155 160
 Val Phe Ser Tyr Leu Ser Pro Ser Ser Asn Thr Thr Ile Pro Thr Leu
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 Pro Arg Leu His Leu Ser Cys Thr
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 <212> DNA
 <213> Homo sapiens

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<210> 72
 <211> 105
 <212> PRT
 <213> Homo sapiens

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 35 40 45
 Phe Ile Leu Pro Asn Ala Leu Ile Arg Thr Ala Gly Gly Arg Glu Val
 50 55 60
 Asn Leu Arg Asp Leu Gln Ala Tyr Ala Leu Lys Gly Gly Leu Asn Gly
 65 70 75 80
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 85 90 95
 Asp Leu Gln Met Ile Gln Asp Leu Glu
 100 105

<210> 73
 <211> 384
 <212> DNA
 <213> Homo sapiens

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<210> 74
 <211> 128
 <212> PRT
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 20 25 30
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 35 40 45
 Pro Trp Asn Phe Ala Leu Ser Ile Thr Ala Gly Ser Thr Leu Ala Ala
 50 55 60
 Leu Ala Ala Gly Ser Ser Val Leu Leu Lys Pro Ala Pro Gln Ala Arg
 65 70 75 80
 His Cys Ala Ala Val Ile Ser Glu Cys Leu Trp Glu Ala Gly Ile Pro
 85 90 95
 Arg Asp Val Leu Gln Leu Val Asp Val Glu Glu Asn Glu Ala Gly Lys
 100 105 110
 His Leu Val Ser His Pro Glu Val Asp Arg Val Ile Leu Thr Gly Gly
 115 120 125

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 <211> 405
 <212> DNA
 <213> Homo sapiens

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<210> 76

<211> 135

<212> PRT

<213> Homo sapiens

<400> 76

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Lys Thr Arg Val Val Ser Phe Trp Thr Met Gly Phe Asn Gln His Thr
      35           40           45
Arg Gly Val Trp Cys Asn Asn Leu Val Tyr Asn Ile His Leu Leu Thr
      50           55           60
Gly Lys Ile Ser Thr Pro Gly Asn Ser Pro Phe Ser Leu Thr Gly Gln
 65           70           75           80
Pro Ser Ala Cys Gly Thr Ala Arg Glu Val Gly Thr Phe Ser His Arg
      85           90           95
Leu Pro Ala Asp Met Val Val Thr Ser Lys Ala His Arg Asp Ile Ala
      100          105          110
Glu Lys Ile Trp Gln Leu Pro Glu Gly Pro Val Pro Asp Lys Pro Gly
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<210> 77

<211> 5816

<212> DNA

<213> Homo sapiens

<400> 77

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cctcagagac atagtggccg ggtgggtggg gccacaggc cagggttctt gagccctgtc
5580

ttctgtctaca gccacgcctt tcagagtgggt ggggaggagg gtttatggat gtcaaacacc
 5640
 tgcaccttga gataatccta caaccacatg cagttgtggg accgcagttt ggtcctgggg
 5700
 accattcata cccacacacc cagcttgtgc ctgtgggttaa catctcagaa aactctggta
 5760
 aatgatcact ccaggatatt gacacgaata cacgttactg atcttactca catgtt
 5816

<210> 78

<211> 799

<212> PRT

<213> Homo sapiens

<400> 78

Ile	Pro	Asn	Leu	Glu	Glu	Asp	Gly	Gly	Gly	Arg	Glu	Leu	Gln	Arg	Gly	1	5	10	15
Leu	His	Leu	Gly	Val	Pro	His	Gly	Ala	Ile	Pro	Gly	Ser	Glu	Arg	Ala	20	25	30	
Thr	Ala	Ser	Ile	Ile	Gly	Asp	Val	Met	Gly	Pro	Thr	Leu	Asn	His	Leu	35	40	45	
Asn	Asn	Leu	Leu	Arg	Leu	Pro	Phe	Gly	Cys	Gly	Glu	Gln	Asn	Met	Ile	50	55	60	
His	Phe	Ala	Pro	Asn	Val	Phe	Val	Leu	Lys	Tyr	Leu	Gln	Lys	Thr	Gln	65	70	75	80
Gln	Leu	Ser	Pro	Glu	Val	Glu	Arg	Glu	Thr	Thr	Asp	Tyr	Leu	Val	Gln	85	90	95	
Gly	Tyr	Gln	Arg	Gln	Leu	Thr	Tyr	Lys	Arg	Gln	Asp	Gly	Ser	Tyr	Ser	100	105	110	
Ala	Phe	Gly	Glu	Arg	Asp	Ala	Ser	Gly	Ser	Met	Trp	Leu	Thr	Ala	Phe	115	120	125	
Val	Leu	Lys	Ser	Phe	Ala	Gln	Ala	Arg	Ser	Phe	Ile	Phe	Val	Asp	Pro	130	135	140	
Arg	Glu	Leu	Ala	Ala	Ala	Lys	Ser	Trp	Ile	Ile	Gln	Gln	Gln	Ala		145	150	155	160
Asp	Gly	Ser	Phe	Leu	Ala	Val	Gly	Arg	Val	Leu	Asn	Lys	Asp	Ile	Gln	165	170	175	
Gly	Gly	Ile	His	Gly	Ile	Val	Pro	Leu	Thr	Ala	Tyr	Val	Val	Val	Ala	180	185	190	
Leu	Leu	Glu	Thr	Gly	Thr	Ala	Ser	Glu	Glu	Glu	Arg	Gly	Ser	Thr	Asp	195	200	205	
Lys	Ala	Arg	His	Phe	Leu	Glu	Ser	Ala	Ala	Pro	Leu	Ala	Met	Asp	Pro	210	215	220	
Tyr	Ser	Cys	Ala	Leu	Thr	Thr	Tyr	Ala	Leu	Thr	Leu	Leu	Arg	Ser	Pro	225	230	235	240
Ala	Ala	Pro	Glu	Ala	Leu	Arg	Lys	Leu	Arg	Ser	Leu	Ala	Ile	Met	Arg	245	250	255	
Asp	Gly	Val	Thr	His	Trp	Ser	Leu	Ser	Asn	Ser	Trp	Asp	Val	Asp	Lys	260	265	270	
Gly	Thr	Phe	Leu	Ser	Phe	Ser	Asp	Arg	Val	Ser	Gln	Ser	Val	Val	Ser	275	280	285	
Ala	Glu	Val	Glu	Met	Thr	Ala	Tyr	Ala	Leu	Leu	Thr	Tyr	Thr	Leu	Leu	290	295	300	
Gly	Asp	Val	Ala	Ala	Ala	Leu	Pro	Val	Val	Lys	Trp	Leu	Ser	Gln	Gln				

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305          310          315          320
Arg Asn Ala Leu Gly Gly Phe Ser Ser Thr Gln Asp Thr Cys Val Ala
          325          330          335
Leu Gln Ala Leu Ala Glu Tyr Ala Ile Leu Ser Tyr Ala Gly Gly Ile
          340          345          350
Asn Leu Thr Val Ser Leu Ala Ser Thr Asn Leu Asp Tyr Gln Glu Thr
          355          360          365
Phe Glu Leu His Arg Thr Asn Gln Lys Val Leu Gln Thr Ala Ala Ile
          370          375          380
Pro Ser Leu Pro Thr Gly Leu Phe Val Ser Ala Lys Gly Asp Gly Cys
385          390          395          400
Cys Leu Met Gln Ile Asp Val Thr Tyr Asn Val Pro Asp Pro Val Ala
          405          410          415
Lys Pro Ala Phe Gln Leu Leu Val Ser Leu Gln Glu Pro Glu Ala Gln
          420          425          430
Gly Arg Pro Pro Met Pro Ala Ser Ala Ala Glu Gly Ser Arg Gly
          435          440          445
Asp Trp Pro Pro Ala Asp Asp Asp Pro Ala Ala Asp Gln His His
          450          455          460
Gln Glu Tyr Lys Val Met Leu Glu Val Cys Thr Arg Trp Leu His Ala
465          470          475          480
Gly Ser Ser Asn Met Ala Val Leu Glu Val Pro Leu Leu Ser Gly Phe
          485          490          495
Arg Ala Asp Ile Glu Ser Leu Glu Gln Leu Leu Leu Asp Lys His Met
          500          505          510
Gly Met Lys Arg Tyr Glu Val Ala Gly Arg Arg Val Leu Phe Tyr Phe
          515          520          525
Asp Glu Ile Pro Ser Arg Cys Leu Thr Cys Val Arg Phe Arg Ala Leu
530          535          540
Arg Glu Cys Val Val Gly Arg Thr Ser Ala Leu Pro Val Ser Val Tyr
545          550          555          560
Asp Tyr Tyr Glu Pro Ala Phe Glu Ala Thr Arg Phe Tyr Asn Val Ser
          565          570          575
Thr His Ser Pro Leu Ala Arg Glu Leu Cys Ala Gly Pro Ala Cys Asn
          580          585          590
Glu Val Glu Arg Ala Pro Ala Arg Gly Pro Gly Trp Phe Pro Gly Glu
          595          600          605
Ser Gly Pro Ala Val Ala Pro Glu Glu Gly Ala Ala Ile Ala Arg Cys
610          615          620
Gly Cys Asp His Asp Cys Gly Ala Gln Gly Asn Pro Val Cys Gly Ser
625          630          635          640
Asp Gly Val Val Tyr Ala Ser Ala Cys Arg Leu Arg Glu Ala Ala Cys
          645          650          655
Arg Gln Ala Ala Pro Leu Glu Pro Ala Pro Pro Ser Cys Cys Ala Leu
          660          665          670
Glu Gln Arg Leu Pro Ala Ser Ser Ser Ser Thr Tyr Gly Asp Asp Leu
          675          680          685
Ala Ser Val Ala Pro Gly Pro Leu Gln Gln Asp Val Lys Leu Asn Gly
690          695          700
Ala Gly Leu Glu Val Glu Asp Ser Asp Pro Glu Pro Glu Gly Glu Ala
705          710          715          720
Glu Asp Arg Val Thr Ala Gly Pro Arg Pro Pro Val Ser Ser Gly Asn
          725          730          735
Leu Glu Ser Ser Thr Gln Ser Ala Ser Pro Phe His Arg Trp Gly Gln

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<210> 79
<211> 346
<212> DNA
<213> Homo sapiens
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<210> 80
<211> 101
<212> PRT
<213> Homo sapiens
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<210> 81
<211> 429
<212> DNA
<213> Homo sapiens
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<400> 81

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 tgactttaat ttgataccag aaatgtcagt gtggctttgc ttgaacagcc gcgtgcgggg
 120
 cctctatgag tggaatccag tctcatggcc ccccccattg ctctgttac cctggaggag
 180
 gctactccat gaggtggct ccggtggcac tgcctcgggg ctgcatgtac atgtgtgtgc
 240
 atgnntgtgt gcatgtgcgt gtgcacgtgt nngtgtgtgc ccgtgtgcat gtgcccgtgt
 300
 gcgtgtctgt gctgtgtgtg tgcgtgcatg tgtgcgtgtc tgtgcgtgnc tgtgtgtgtg
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 cgtgcatgtg tgtgcacgtg tgtgcatgtg cacgtgtgcg cacccgtgtg catgtccgtg
 420
 tgcacgcgt
 429

<210> 82
 <211> 79
 <212> PRT
 <213> Homo sapiens

<400> 82
 Gly Trp Leu Arg Trp His Cys Leu Gly Ala Ala Cys Thr Cys Val Cys
 1 5 10 15
 Met Xaa Val Cys Met Cys Val Cys Thr Cys Xaa Cys Val Pro Val Cys
 20 25 30
 Met Cys Pro Cys Ala Cys Leu Cys Cys Val Cys Ala Cys Met Cys Ala
 35 40 45
 Cys Leu Cys Val Xaa Val Cys Val Arg Ala Cys Val Cys Thr Cys Val
 50 55 60
 His Val His Val Cys Ala Pro Val Cys Met Ser Val Cys Thr Arg
 65 70 75

<210> 83
 <211> 411
 <212> DNA
 <213> Homo sapiens

<400> 83
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 cgtgcgctct ttaaaaagcg caaaggcttt tataagttcg atgtgctttt ttccaggccc
 120
 ggaaagacgc gatccgtaga taaaataggc ccgctttatc gcaaattggc ttatggttac
 180
 cgttttcgca tcgatttgca gctgcggaaa aaaaggcctg tggtcgatgc cgttgtggat
 240
 gatttcgatt ttcgctttgt cgatgccaaag ccctatcaaa tcgtttcgca aaaactcgct
 300
 cgcggcgacg atcttttgca cctttgtaag ccccgctttt atctgcatgc gcatcatgcg
 360
 gtcgctcttt tctttgagca tgacggaaac gatggaattg acgacggcga c
 411

<210> 84
 <211> 127
 <212> PRT
 <213> Homo sapiens

<400> 84
 Met Leu Lys Glu Lys Ser Asp Arg Met Met Arg Met Gln Ile Lys Arg
 1 5 10 15
 Gly Leu Thr Lys Val Gln Lys Ile Val Ala Ala Ser Glu Phe Leu Arg
 20 25 30
 Asn Asp Leu Ile Gly Leu Gly Ile Asp Lys Ala Lys Ile Glu Ile Ile
 35 40 45
 His Asn Gly Ile Asp His Arg Pro Phe Phe Pro Gln Leu Gln Ile Asp
 50 55 60
 Ala Glu Thr Val Thr Ile Lys Pro Phe Ala Ile Lys Arg Pro Tyr Phe
 65 70 75 80
 Ile Tyr Gly Ser Arg Leu Ser Gly Pro Glu Lys Lys His Ile Glu Leu
 85 90 95
 Ile Lys Ala Phe Ala Leu Phe Lys Glu Arg Thr Lys Ser Pro His Pro
 100 105 110
 Leu Val Ile Ala Gly Ala Glu Gly Pro Ser Ser Glu Glu Val His
 115 120 125

<210> 85
 <211> 333
 <212> DNA
 <213> Homo sapiens

<400> 85
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 atcctcgacg cgggtgaaact gctgagttcg ctcggttca aggtgatcgc cacctcgggc
 120
 acccagcgtt tcctggtgga gaacggagta ccggcggaag agatcaacaa ggtgctggaa
 180
 ggccgcccgc acattgttga cgcaattacc aacggcgagg tgcaactcgt tttcaatacc
 240
 accgaggggc cacaggcgtt ggctgacagc cgctcgttgc gacgcgctgc cctcttgcac
 300
 aaagtgccat attacaccac tctttcaggt gca
 333

<210> 86
 <211> 111
 <212> PRT
 <213> Homo sapiens

<400> 86
 Xaa Arg Val Pro Arg Lys Gly Thr Met Phe Val Ser Val Arg Glu Thr
 1 5 10 15
 Asp Lys Ala Arg Ile Leu Asp Ala Val Lys Leu Leu Ser Ser Leu Gly
 20 25 30
 Phe Lys Val Ile Ala Thr Ser Gly Thr Gln Arg Phe Leu Val Glu Asn

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```

      35              40              45
Gly Val Pro Ala Glu Lys Ile Asn Lys Val Leu Glu Gly Arg Pro His
      50              55              60
Ile Val Asp Ala Ile Thr Asn Gly Glu Val Gln Leu Val Phe Asn Thr
65              70              75              80
Thr Glu Gly Pro Gln Ala Leu Ala Asp Ser Arg Ser Leu Arg Arg Ala
      85              90              95
Ala Leu Leu His Lys Val Pro Tyr Tyr Thr Thr Leu Ser Gly Ala
      100              105              110

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<210> 87

<211> 355

<212> DNA

<213> Homo sapiens

<400> 87

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acgcgtgagg aaatgggggc cgcaggcctg gatcgcaagg tatggcagtg cccggtcgtc
60
ctcctgagcg atgttcattc ggtaggggta cagggtgacg ggcgtactta tggttctccc
120
attgtgcttc gcccggtgac gagtgaggac gccatgactg cggactgggc acgtatccca
180
tatgacgtac tggaaaagat ctgcactcgc attacgaatg cgtgtccgca aatcaaccgg
240
gtgggtactcg atatcacatc taaaccgccg gccaccatcg agtgggaatg agccccgtct
300
caccgtgaac atgacatggc ccgcaccttt cttggggcgg gccatgccgt gttag
355

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<210> 88

<211> 96

<212> PRT

<213> Homo sapiens

<400> 88

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Thr Arg Glu Glu Met Gly Ala Ala Gly Leu Asp Arg Lys Val Trp Gln
1              5              10              15
Cys Pro Val Val Leu Leu Ser Asp Val His Ser Val Gly Val Gln Gly
      20              25              30
Asp Gly Arg Thr Tyr Gly Ser Pro Ile Val Leu Arg Pro Val Thr Ser
      35              40              45
Glu Asp Ala Met Thr Ala Asp Trp Ala Arg Ile Pro Tyr Asp Val Leu
50              55              60
Glu Lys Ile Ser Thr Arg Ile Thr Asn Ala Cys Pro Gln Ile Asn Arg
65              70              75              80
Val Val Leu Asp Ile Thr Ser Lys Pro Pro Ala Thr Ile Glu Trp Glu
      85              90              95

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<210> 89

<211> 351

<212> DNA

<213> Homo sapiens

<400> 89

ATTORNEY DOCKET NO.: 15966-543

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 120
 ggtgattgga taaggccaga ggggtgggag ggggtctgcc cctgctgaag cctgggtggg
 180
 cccaggctctg tgatctggga ccggaacaac acatctgctc tgggcctgct ggatgtggcg
 240
 caagccctgg aacagaacca cagcctcaag tccatgccgc tgccactgaa tgacgtaacc
 300
 caggctcctc gcagccggcc agaactcaca actcgagcgg tccatcagat c
 351

<210> 90

<211> 61

<212> PRT

<213> Homo sapiens

<400> 90

Ser	Leu	Val	Gly	Pro	Arg	Ser	Val	Ile	Trp	Asp	Arg	Asn	Asn	Thr	Ser
1				5				10					15		
Ala	Leu	Gly	Leu	Leu	Asp	Val	Ala	Gln	Ala	Leu	Glu	Gln	Asn	His	Ser
			20				25					30			
Leu	Lys	Ser	Met	Pro	Leu	Pro	Leu	Asn	Asp	Val	Thr	Gln	Ala	His	Arg
	35					40					45				
Ser	Arg	Pro	Glu	Leu	Thr	Thr	Arg	Ala	Val	His	Gln	Ile			
50					55						60				

<210> 91

<211> 327

<212> DNA

<213> Homo sapiens

<400> 91

nggtgggtcc tctgcagga caggtaatcc tgagacctac gcagctccct ggagctctgc
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 120
 cggaaggggc tgtagactcc ctgccagcgg ctttcccgga gaaggcacc acgcccagct
 180
 gcctcttgca ggtactgctc ggggtctggtg ggagggcagc cgtgtccagc acacctgtg
 240
 tgtgcagtcc tctccctgcc cactgccga acgagccctc cacggtgaag ccattgggga
 300
 acgtgacctt gcccttcccc atgaggt
 327

<210> 92

<211> 107

<212> PRT

<213> Homo sapiens

<400> 92

Met	Gly	Lys	Gly	Lys	Val	Thr	Phe	Pro	Asn	Gly	Phe	Thr	Val	Glu	Gly
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

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```

      1           5           10           15
Ser Phe Gly Ser Gly Ala Gly Arg Gly Leu His Thr Gln Gly Val Leu
      20           25           30
Asp Thr Ala Ala Leu Pro Pro Asp Pro Ser Ser Thr Cys Lys Arg Gln
      35           40           45
Leu Gly Val Gly Ala Phe Pro Gly Lys Ala Ala Gly Arg Glu Ser Thr
      50           55           60
Ala Pro Ser Gly Thr Leu Cys Val Leu Ala Ala Pro Gly Thr Cys Arg
      65           70           75           80
Arg Pro Cys Trp Ala Ser Thr Cys Arg Ala Pro Gly Ser Cys Val Gly
      85           90           95
Leu Arg Ile Thr Cys Pro Ala Arg Gly Pro Thr
      100           105

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<210> 93

<211> 394

<212> DNA

<213> Homo sapiens

<400> 93

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atgctcgaat gggacggcgg acatgagcaa taggccgcca aagcacagcg agaggaaggc
120
ggcgcgctct gcggcctcgc ggatgaagga ggggtggtcg cgcaagagac gccccgcgcc
180
ttttgtaccg ataaatcccg ggcgccacct gatcgtgacc gagggtagca aaacggaacc
240
gctctatttc gaggctatca ggttgctgtt caacaaccgt tatcacggcc agtgggtgac
300
aatggaagtt gtcgttaccg gcaagcatac caggggactt ctcgatcgtg cagtcactct
360
ggcgggaagaa agtgccacag gattcactca cgta
394

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<210> 94

<211> 109

<212> PRT

<213> Homo sapiens

<400> 94

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Met Leu Ala Gly Asn Asp Asn Phe His Cys His Pro Leu Ala Val Ile
      1           5           10           15
Thr Val Val Asp Thr Gln Pro Asp Ser Leu Glu Ile Glu Arg Phe Arg
      20           25           30
Phe Arg Thr Leu Gly His Asp Gln Val Ala Pro Gly Ile Tyr Arg Tyr
      35           40           45
Lys Arg Arg Gly Ala Ser Leu Ala Arg Pro Pro Leu Leu His Pro Arg
      50           55           60
Gly Arg Arg Ala Arg Arg Leu Pro Leu Ala Val Leu Trp Arg Pro Ile
      65           70           75           80
Ala His Val Arg Arg Pro Ile Arg Ala Cys Cys Ser Gly Met Gly Pro
      85           90           95
His Arg Asn Ala Pro Arg Gly Thr Ala Cys Arg Thr Arg

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100

105

<210> 95
 <211> 531
 <212> DNA
 <213> Homo sapiens

<400> 95
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 60
 tgcttgatc ctaaaatgga ctggtcttgg gtgtgtaacc ccggtgaagt tatagcctcc
 120
 ccaaattgag gtgacagaag gaagacaaga ggtgtaagct ggagagggaa gggaagaaat
 180
 cagtggcttt ggccagcttc tgtgccaccc agtacgacag aggagtggga actggccctc
 240
 tggggtctg cttggccata ggcactgcac attgtgccac ctgctcatca cctcctctag
 300
 tctcacactg agcatcggag tacctgttgt gcagacagga aaactgagga gctctgagag
 360
 gctgagcatg gagctcacc catgccatag ggtgtgggaa gagggcacag gaggcctcat
 420
 ccattggggga aagggttgag gatggacatg ggtggggaga gggcatagac atcccttctt
 480
 aatctctgtt cccaccacat ttcattaggag atgagttagg agatgacagc t
 531

<210> 96
 <211> 124
 <212> PRT
 <213> Homo sapiens

<400> 96
 Met Arg Pro Pro Val Pro Ser Ser His Thr Leu Trp His Gly Val Ser
 1 5 10 15
 Ser Met Leu Ser Leu Ser Glu Leu Leu Ser Phe Pro Val Cys Thr Thr
 20 25 30
 Gly Thr Pro Met Leu Ser Val Arg Leu Glu Glu Val Met Ser Arg Trp
 35 40 45
 His Asn Val Gln Cys Leu Trp Pro Ser Arg Ala Pro Glu Gly Gln Phe
 50 55 60
 Pro Leu Leu Cys Arg Thr Gly Trp His Arg Gly Trp Pro Lys Pro Leu
 65 70 75 80
 Ile Ser Ser Leu Pro Ser Pro Ala Tyr Thr Ser Cys Leu Pro Ser Val
 85 90 95
 Thr Ser Ile Trp Gly Gly Tyr Asn Phe Thr Gly Val Thr His Pro Arg
 100 105 110
 Pro Val His Phe Arg Ile Gln Ala Lys Phe Pro Glu
 115 120

<210> 97
 <211> 405
 <212> DNA
 <213> Homo sapiens

<400> 97

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 120
 cgacatcgtg tctgagacgt cgaagctcag gccagctttt ggcgccagg cgcgctcggg
 180
 cggtcgcccc tcttgccgca attgattcag cgcaatcccg gccatcacat gccagcgctt
 240
 gtccagggtc atgaaatcct gggcataggc gcgcgaggag cgcagcggcg aattggacag
 300
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 360
 gcccgggaaa agatcccccg acgccatcgt ggtgtcgacc gagat
 405

<210> 98

<211> 122

<212> PRT

<213> Homo sapiens

<400> 98

Met	Ala	Ser	Gly	Asp	Leu	Phe	Pro	Gly	Asn	Val	Phe	Ser	Pro	Arg	Val
1				5					10					15	
Pro	Phe	Pro	Ser	Ser	Asp	Ile	Thr	Pro	Asn	Ile	Glu	Arg	Leu	Ser	Asn
			20					25					30		
Ser	Pro	Leu	Arg	Ser	Ser	Arg	Ala	Tyr	Ala	Gln	Asp	Phe	Met	Thr	Leu
			35				40					45			
Asp	Lys	Arg	Trp	His	Val	Met	Ala	Gly	Ile	Ala	Leu	Asn	Gln	Leu	Pro
	50					55					60				
Gln	Glu	Gly	Gly	Pro	Thr	Glu	Arg	Ala	Trp	Thr	Pro	Lys	Leu	Gly	Leu
	65				70					75				80	
Ser	Phe	Asp	Val	Ser	Asp	Thr	Met	Ser	Leu	Tyr	Gly	Ala	Tyr	Ser	Arg
			85						90					95	
Gly	Phe	Ser	Thr	Tyr	Gln	Pro	Ala	Arg	Lys	Ala	Pro	Arg	Ala	Tyr	Gly
			100					105					110		
Pro	Ser	Ala	Ala	Arg	Pro	Ser	Lys	Arg	Glu						
			115					120							

<210> 99

<211> 545

<212> DNA

<213> Homo sapiens

<400> 99

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 tgccccgacg acccagcaaa cgtccccggc tgttcctcat tgaccacgcc gaccggatcg
 120
 tcgatcccat cactcgggat ttgctggaat ccctgggtcg cgaagccggc gaggctgcgg
 180
 tgatcttggg tgcccagcgt cgcggtcgca tcgattggct cteccacag atcatccaca
 240

acctggccga acaccatttt gagtcgtcct ctggaggtac tcatgatga ctgaacgttc
 300
 ccattccacg atcagggttaa ggtggccggc ggtggtggtt ctctcctcgt ttccgctgct
 360
 ggtggtcgcc ggattggtcc gggacgacct ggcataccac cgaccgggtg ggccgggtga
 420
 aagcggccgt cgtcaacgag gacaaggccg tcaagggtcg tggacaactg gttccgatgg
 480
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 tcgac
 545

<210> 100

<211> 101

<212> PRT

<213> Homo sapiens

<400> 100

Met	Gly	Thr	Phe	Ser	His	His	Arg	Val	Pro	Pro	Glu	Asp	Asp	Ser	Lys
1				5					10					15	
Trp	Cys	Ser	Ala	Arg	Leu	Trp	Met	Ile	Cys	Gly	Glu	Ser	Gln	Ser	Met
			20				25						30		
Arg	Pro	Arg	Arg	Trp	Ala	Pro	Lys	Ile	Thr	Ala	Ala	Ser	Pro	Ala	Ser
		35					40					45			
Arg	Thr	Arg	Asp	Ser	Ser	Lys	Ser	Arg	Val	Met	Gly	Ser	Thr	Ile	Arg
	50					55				60					
Ser	Ala	Trp	Ser	Met	Arg	Asn	Ser	Arg	Gly	Arg	Leu	Leu	Gly	Arg	Arg
65					70				75					80	
Gly	Arg	Trp	Val	Ser	Thr	Val	Ile	Ala	Glu	Arg	Ser	Ser	Ser	Thr	Thr
			85					90						95	
Ser	Gly	Ala	Asp	Ala											
				100											

<210> 101

<211> 619

<212> DNA

<213> Homo sapiens

<400> 101

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 tcatgcacga tccggacttc gatccgatcc ccatgggtgaa caaggagctt gacgccttcg
 120
 aagctgccgg ggggtgactat ctcatcctcg ccacggattc cggacgcaag ggatacacga
 180
 ccgcccgtcc tcacgaggcc ggcggaacac gctattacca acctggacca gatccgcgaa
 240
 gtctgcgcca gccgcaacgt caccgcctgt ctacaccccc attggggaac gatgggtccag
 300
 aaccgtgacg aagtgatccg cgtgctcgag aactcctcga tcgggctgtg cctggacact
 360
 ggatcatctgg cctgtgggtg taccgatgtc gttgagctgg tgcgtaagta cgccaaccgc
 420

gtcgacattg tccacgcca agatgtccat aaggagatgg ccgacaagct ttgcctggc
 480
 gagatcacct ggtccgaagg cattcgcgcc gggatgttcg caccatcgg cgacggtgat
 540
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 600
 ctagagcagg acatcatga
 619

<210> 102
 <211> 173
 <212> PRT
 <213> Homo sapiens

<400> 102
 Thr Arg Ser Leu Thr Pro Ser Lys Leu Pro Gly Val Thr Ile Ser Ser
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 Ser Pro Arg Ile Pro Asp Ala Arg Asp Thr Arg Pro Pro Val Leu Thr
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 Arg Pro Ala Glu Asn Ala Ile Thr Asn Leu Asp Gln Ile Arg Glu Val
 35 40 45
 Cys Ala Ser Arg Asn Val Thr Ala Cys Leu His Pro His Trp Gly Thr
 50 55 60
 Met Val Gln Asn Arg Asp Glu Val Ile Arg Val Leu Glu Asn Ser Ser
 65 70 75 80
 Ile Gly Leu Cys Leu Asp Thr Gly His Leu Ala Cys Gly Gly Thr Asp
 85 90 95
 Val Val Glu Leu Val Arg Lys Tyr Ala Asn Arg Val Asp Ile Val His
 100 105 110
 Ala Lys Asp Val His Lys Glu Met Ala Asp Lys Leu Leu Pro Gly Glu
 115 120 125
 Ile Thr Trp Ser Glu Gly Ile Arg Ala Gly Met Phe Ala Pro Ile Gly
 130 135 140
 Asp Gly Asp Ile Asp Phe Ala Ala Ile Val Arg Leu Leu Asp Glu Ala
 145 150 155 160
 Gly Phe Asp Gly Tyr Tyr Val Leu Glu Gln Asp Ile Met
 165 170

<210> 103
 <211> 321
 <212> DNA
 <213> Homo sapiens

<400> 103
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 gccattgggg ggagaccct gccgtgggga aagaccctg ccatggggga gaccctgccc
 120
 actgggggga gaccctgccc gctgggggga gaccgagcc attgggggga gaccctgccc
 180
 atggggaaag acccctgcca ttgggggaga ntacctgcca ttgggggaga tccctgccct
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 300

agtgggtggg gcgaagaccc c
321

<210> 104
<211> 107
<212> PRT
<213> Homo sapiens

<400> 104
Xaa His Gly Gly Arg Gln Gln Pro Cys Gly Gly Asp Pro Ser His Trp
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Gly Glu Thr Pro Ala Ile Gly Gly Arg Pro Leu Pro Trp Gly Lys Thr
20 25 30
Pro Ala Met Gly Gln Thr Pro Ala Thr Gly Gly Arg Pro Leu Pro Leu
35 40 45
Gly Gly Asp Pro Ser His Trp Gly Glu Thr Pro Ala Met Gly Lys Asp
50 55 60
Pro Cys His Trp Gly Arg Xaa Pro Ala Ile Gly Gly Asp Pro Cys Arg
65 70 75 80
Trp Gly Glu Ile Pro Ala Val Gly Gly Arg Xaa Pro Pro Val Gly Glu
85 90 95
Asp Pro Cys Arg Ser Gly Trp Gly Glu Asp Pro
100 105

<210> 105
<211> 344
<212> DNA
<213> Homo sapiens

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120
gggcggggccc gcgcgcggcc gggcctgatt ccagcctctc gtgctcgtcc cagtaccat
180
ccagcgcacg gccccagcgg tcggcatccc agccgtggtc gccgtcgagc gccccaggg
240
cctcaatgtc gtcacggcg gccagttcca cccggcggaa catctcgttg cggaccatga
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<210> 106
<211> 62
<212> PRT
<213> Homo sapiens

<400> 106
Cys Ala Thr Gly Arg Ala Arg Ala Arg Pro Gly Leu Ile Pro Ala Ser
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Arg Ala Arg Pro Ser Thr His Pro Ala His Arg Pro Ser Gly Arg His
20 25 30
Pro Ser Arg Gly Arg Arg Arg Ala Pro Pro Gly Pro Gln Cys Arg His


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<210> 108
<211> 108
<212> PRT
<213> Homo sapiens
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<210>	109
<211>	748

<212> DNA

<213> Homo sapiens

<400> 109

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120
gatattgggg taagttacca atttacttta cagcccttaa gtaaataatc tgctttcctc
180
agcatcatag acttttgaag aggattaatt aagcgcttaa aaaacctgta gactctatta
240
cagtcagtga aaggaataat tctctttaca aagtaaatgc agttgtttta ttttagacaa
300
gagtgttcta aacttcgtga agagttaagg cttcaacatg aagaggataa gaagtcagca
360
atgtctcaac ttttgcagtt gaaagatcga gagaaaaatg cagcaagaga ttcattggcag
420
aagaaagtag aagatctctt aaaccagatt tccttgctga aacagaatct ggagatacag
480
ctttcccgat ctcagacttc tttgcaacaa ctgcaagccc agtttacgca agaacgacag
540
cggcttacgc aagagcttga agaattagag gagcaacatc agcaaagaca caaatcatta
600
aaagaagcac atgtccttgc atttcaaact atggaagagg aaaaggaaaa ggagcaaaga
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748

<210> 110

<211> 157

<212> PRT

<213> Homo sapiens

<400> 110

Met Gln Leu Phe Tyr Phe Arg Gln Glu Cys Ser Lys Leu Arg Glu Glu
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Leu Arg Leu Gln His Glu Glu Asp Lys Lys Ser Ala Met Ser Gln Leu
20 25 30
Leu Gln Leu Lys Asp Arg Glu Lys Asn Ala Ala Arg Asp Ser Trp Gln
35 40 45
Lys Lys Val Glu Asp Leu Leu Asn Gln Ile Ser Leu Leu Lys Gln Asn
50 55 60
Leu Glu Ile Gln Leu Ser Gln Ser Gln Thr Ser Leu Gln Gln Leu Gln
65 70 75 80
Ala Gln Phe Thr Gln Glu Arg Gln Arg Leu Thr Gln Glu Leu Glu Glu
85 90 95
Leu Glu Glu Gln His Gln Gln Arg His Lys Ser Leu Lys Glu Ala His
100 105 110
Val Leu Ala Phe Gln Thr Met Glu Glu Glu Lys Glu Lys Glu Gln Arg
115 120 125
Ala Leu Glu Asn His Leu Gln Gln Lys His Ser Ala Glu Leu Gln Ser

130 135 140
 Leu Lys Asp Ala His Arg Glu Ser Met Glu Gly Phe Arg
 145 150 155

<210> 111
 <211> 429
 <212> DNA
 <213> Homo sapiens

<400> 111
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 120
 tcgggttatn nacgccacca gcatncgact ttggtcgaga tcatcgacc gttcggacat
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 240
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 300
 caaggccggg cactggccag catcgccgac ctctcgaga aggggcagat ccgtccgacg
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 429

<210> 112
 <211> 143
 <212> PRT
 <213> Homo sapiens

<400> 112
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 20 25 30
 Ile Thr Gly Phe Asp Gly Ile Leu Ser Ala Tyr Xaa Arg His Gln His
 35 40 45
 Xaa Thr Leu Ala Glu Ile Ile Ala Pro Phe Gly His Leu Val Met Ile
 50 55 60
 Asp Gly Thr Asp Ser Phe Asp Leu Met Ala Phe Lys Ser Lys Ser Leu
 65 70 75 80
 Thr Val Thr Ser Glu Ser Met Phe Ser Arg Pro Gln Phe Ala Thr Pro
 85 90 95
 Asp Val Ala Glu Gln Gly Arg Ala Leu Ala Ser Ile Ala Asp Leu Val
 100 105 110
 Glu Lys Gly Gln Ile Arg Pro Thr Met Thr Arg His Ile Glu Gly Leu
 115 120 125
 Thr Thr Gln His Val Arg Glu Ala Thr Ala Ala Val Glu Ser Gly
 130 135 140

<210> 113
 <211> 382

<212> DNA

<213> Homo sapiens

<400> 113

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 180
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 240
 ctgtccctgg ggggcagcca cctgcgagtc tcttctgcg cccctgggac ccccgggcgc
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 382

<210> 114

<211> 125

<212> PRT

<213> Homo sapiens

<400> 114

Met	Leu	Gly	Ser	Gly	Arg	Thr	Pro	Cys	Pro	Arg	Leu	Arg	Ala	Val	Ala
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			20					25					30		
Ala	Gln	Lys	Glu	Thr	Arg	Arg	Trp	Leu	Pro	Pro	Arg	Asp	Arg	Pro	Ser
		35					40					45			
Ala	Cys	Cys	Cys	Ala	Ser	Ser	Ala	Ile	Ser	Ala	Val	Ser	Tyr	Ser	Ser
	50					55					60				
Thr	Ala	Lys	Pro	Phe	Ser	Cys	Pro	Ser	Trp	Pro	His	Ala	Ser	Trp	Gln
65					70				75					80	
Lys	Val	Gly	Leu	Trp	Thr	Ala	Asp	Ser	Ala	Arg	His	Arg	Ala	Ser	Thr
				85				90					95		
Ser	Leu	Lys	Pro	Gly	Gly	Arg	Arg	Ser	Thr	Gln	Arg	Gln	Gln	Glu	Trp
			100					105					110		
Arg	Arg	Ala	Gly	Leu	Ser	Ser	Pro	Ala	Ser	Val	Gln	Cys			
			115				120					125			

<210> 115

<211> 4798

<212> DNA

<213> Homo sapiens

<400> 115

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 120
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240
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360
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420
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4680
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<210> 116

<211> 1062

<212> PRT

<213> Homo sapiens

<400> 116

Met Met Gly Thr Ser Gln Gly His Val Ala Arg Lys Ser Arg Asn Trp

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Gly Leu Asn Pro Ser Arg Leu Ser Ser Ile Pro Leu Ser Ser Thr Pro			
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Cys His Leu Ser Pro Ser Ser Leu Ser Pro Phe Ser Val Ala Glu Arg			
	35	40	45
Lys Pro Pro Leu Phe Asn Met Asn Ala Met Ser Ala Leu Tyr His Ile			
	50	55	60
Ala Gln Asn Glu Ser Pro Val Leu Gln Ser Gly His Trp Ser Glu Tyr			
65	70	75	80
Phe Arg Asn Phe Val Asp Ser Cys Leu Gln Lys Ile Pro Gln Asp Arg			
	85	90	95
Pro Thr Ser Glu Val Leu Leu Lys His Arg Phe Val Leu Arg Glu Arg			
	100	105	110
Pro Pro Thr Val Ile Met Asp Leu Ile Gln Arg Thr Lys Asp Ala Val			
	115	120	125
Arg Glu Leu Asp Asn Leu Gln Tyr Arg Lys Met Lys Lys Ile Leu Phe			
	130	135	140
Gln Glu Ala Pro Asn Gly Pro Gly Ala Glu Ala Pro Glu Glu Glu Glu			
145	150	155	160
Glu Ala Glu Pro Tyr Met His Arg Ala Gly Thr Leu Thr Ser Leu Glu			
	165	170	175
Ser Ser His Ser Val Pro Ser Met Ser Ile Ser Ala Ser Ser Gln Ser			
	180	185	190
Ser Ser Val Asn Ser Leu Ala Asp Ala Ser Asp Asn Glu Glu Glu Glu			
	195	200	205
Glu Glu Glu Glu Glu Glu Glu Glu Glu Gly Pro Glu Ala Arg			
	210	215	220
Glu Met Ala Met Met Gln Glu Gly Glu His Thr Val Thr Ser His Ser			
225	230	235	240
Ser Ile Ile His Arg Leu Pro Gly Ser Asp Asn Leu Tyr Asp Asp Pro			
	245	250	255
Tyr Gln Pro Glu Ile Thr Pro Ser Pro Leu Gln Pro Pro Ala Ala Pro			
	260	265	270
Ala Pro Thr Ser Thr Thr Ser Ser Ala Arg Arg Arg Ala Tyr Cys Arg			
	275	280	285
Asn Arg Asp His Phe Ala Thr Ile Arg Thr Ala Ser Leu Val Ser Arg			
	290	295	300
Gln Ile Gln Glu His Glu Gln Asp Ser Ala Leu Arg Glu Gln Leu Ser			
305	310	315	320
Gly Tyr Lys Arg Met Arg Arg Gln His Gln Lys Gln Leu Leu Ala Leu			
	325	330	335
Glu Ser Arg Leu Arg Gly Glu Arg Glu Glu His Ser Ala Arg Leu Gln			
	340	345	350
Arg Glu Leu Glu Ala Gln Arg Ala Gly Phe Gly Ala Glu Ala Glu Lys			
	355	360	365
Leu Ala Arg Arg His Gln Ala Ile Gly Glu Lys Glu Ala Arg Ala Ala			
	370	375	380
Gln Ala Glu Glu Arg Lys Phe Gln Gln His Ile Leu Gly Gln Gln Lys			
385	390	395	400
Lys Glu Leu Ala Ala Leu Leu Glu Ala Gln Lys Arg Thr Tyr Lys Leu			
	405	410	415
Arg Lys Glu Gln Leu Lys Glu Glu Leu Gln Glu Asn Pro Ser Thr Pro			
	420	425	430
Lys Arg Glu Lys Ala Glu Trp Leu Leu Arg Gln Lys Glu Gln Leu Gln			

481

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865              870              875              880
Pro Gly Leu Ala Leu Pro Leu Val Ala Met Ala Ala Gly Gly Arg Trp
              885              890              895
Val Arg Gln Gln Gly Pro Arg Val Arg Arg Gly Ile Ser Arg Leu Trp
              900              905              910
Leu Arg Val Leu Leu Arg Leu Ser Pro Met Ala Phe Arg Ala Leu Gln
              915              920              925
Gly Cys Gly Ala Val Gly Asp Arg Gly Leu Phe Ala Leu Tyr Pro Lys
              930              935              940
Thr Asn Lys Asp Gly Phe Arg Ser Arg Leu Pro Val Pro Gly Pro Arg
              945              950              955              960
Arg Arg Asn Pro Arg Thr Thr Gln His Pro Leu Ala Leu Leu Ala Arg
              965              970              975
Val Trp Val Leu Cys Lys Gly Trp Asn Trp Arg Leu Ala Arg Ala Ser
              980              985              990
Gln Gly Leu Ala Ser His Leu Pro Pro Trp Ala Ile His Thr Leu Ala
              995              1000              1005
Ser Trp Gly Leu Leu Arg Gly Glu Arg Pro Thr Arg Ile Pro Arg Leu
              1010              1015              1020
Leu Pro Arg Ser Gln Arg Gln Leu Gly Pro Pro Ala Ser Arg Gln Pro
              1025              1030              1035              1040
Leu Pro Gly Thr Leu Ala Gly Arg Arg Ser Arg Thr Arg Gln Ser Arg
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Ala Leu Pro Pro Trp Arg
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<210> 117
 <211> 471
 <212> DNA
 <213> Homo sapiens

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<400> 117
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120
gtcacgggcg gagtgcgaat gttttggatc ccgctgccga actccatcat tgctttgggg
180
acgcctactt cgatcttggg gacggtgttc ttcatgtgtg tgtgcgcaa tgcggtgaat
240
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471

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<210> 118
 <211> 157
 <212> PRT
 <213> Homo sapiens

<400> 118

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 35 40 45
 Trp Ile Pro Leu Pro Asn Ser Ile Ile Ala Leu Gly Thr Pro Thr Ser
 50 55 60
 Ile Leu Val Thr Val Phe Phe Ile Val Leu Cys Ala Asn Ala Val Asn
 65 70 75 80
 Phe Ile Asp Gly Leu Asp Gly Leu Ala Ser Gly Val Val Ala Ile Gly
 85 90 95
 Ser Leu Ala Phe Phe Ser Tyr Thr Tyr Leu Leu Ala His Glu Gln Asp
 100 105 110
 Phe Val Val Ala Thr Thr Thr Ser Leu Ile Thr Ala Ala Thr Ala Gly
 115 120 125
 Ala Cys Leu Gly Phe Leu Pro His Asn Trp His Pro Ala Arg Met Phe
 130 135 140
 Met Gly Asp Ser Gly Ala Leu Leu Leu Gly Leu Leu Leu
 145 150 155

<210> 119

<211> 302

<212> DNA

<213> Homo sapiens

<400> 119

ntcaaacatg agcagtcgtg gcggccgagg ccgcggtggc tattatcgcg agctttatgg
 60
 tagccgaggt cgaggcagta aatctaataa aactttcgca aaaaattcgg atgtctactc
 120
 tcagaaaaag actcgaacag tacgaggcac ctccgaagat ttagcacgat cgctccataa
 180
 gcttcatatg cgcccgatcc ctgcgtatca tgacattgag ggtatgtggg ctttcccagc
 240
 ctttactttt tatctggatc atgcacaagc agaccatac gctgccccaa ataaggcacg
 300
 cn
 302

<210> 120

<211> 98

<212> PRT

<213> Homo sapiens

<400> 120

Met Ser Ser Arg Gly Gly Arg Gly Arg Gly Tyr Tyr Arg Glu Leu
 1 5 10 15
 Tyr Gly Ser Arg Gly Arg Gly Ser Lys Ser Asn Glu Thr Phe Ala Lys
 20 25 30
 Asn Ser Asp Val Tyr Ser Gln Lys Lys Thr Arg Thr Val Arg Gly Thr
 35 40 45
 Ser Glu Asp Leu Ala Arg Ser Leu His Lys Leu His Met Arg Pro Tyr

50 55 60
 Pro Ala Tyr His Asp Ile Glu Gly Met Trp Ala Phe Pro Ala Phe Thr
 65 70 75 80
 Phe Tyr Leu Asp His Ala Gln Ala Asp Pro Tyr Ala Ala Pro Asn Lys
 85 90 95
 Ala Arg

<210> 121
 <211> 318
 <212> DNA
 <213> Homo sapiens

<400> 121
 ngcatggggg gccctgggac cgcacttggtg cccctttttt ttttagggaa aaaattgagc
 60
 cctaaaggat ttgccgcatt acaggaaagt tttttggtta gtttggggtt gtttctgtgc
 120
 tgtgtgagaa ggagtagaag cagctccagt agagtgggcc ttttcatttt tatccagagg
 180
 aaattttagtag gctgtggcta ttacttcctt ttttttcttt tttttttttg ttttagagaca
 240
 gagtctgnct ctgtcgccag gctggagtga agtggcacga tctcagctca ctgcaacctc
 300
 tgcctcccag gttcaagc
 318

<210> 122
 <211> 89
 <212> PRT
 <213> Homo sapiens

<400> 122
 Xaa Met Gly Gly Pro Gly Thr Ala Leu Val Pro Leu Phe Phe Leu Gly
 1 5 10 15
 Lys Lys Leu Ser Pro Lys Gly Phe Ala Ala Leu Gln Glu Ser Phe Leu
 20 25 30
 Val Ser Leu Gly Leu Phe Leu Cys Cys Val Arg Arg Ser Arg Ser Ser
 35 40 45
 Ser Ser Arg Val Gly Leu Phe Ile Phe Ile Gln Arg Lys Phe Val Gly
 50 55 60
 Cys Gly Tyr Tyr Phe Leu Phe Phe Leu Phe Phe Phe Cys Leu Glu Thr
 65 70 75 80
 Glu Ser Xaa Ser Val Ala Arg Leu Glu
 85

<210> 123
 <211> 338
 <212> DNA
 <213> Homo sapiens

<400> 123
 accggtctag ggtagaaatc aactccagta actgtcattc aacctcagca atgctgggga
 60

cgggcagagg cagggcagct gtgtgccaca ttcttgccag ggctggtcag gccccggctc
 120
 tcaccactcc tcctccctgc tttgaacctg tggaacaaag ggccccctgca ccccaactca
 180
 ttctcttttg ccacataagg gcctcaagtc atgctgtccc ctctgcctgg gttgcttttt
 240
 ctccctctgc ttgggtcact gttcacacca ctggccactt tcctcaggga agggccctca
 300
 ctgccacac acctaaacat gccccctgct cctccata
 338

<210> 124
 <211> 96
 <212> PRT
 <213> Homo sapiens

<400> 124
 Met Leu Gly Thr Gly Arg Gly Arg Ala Ala Val Cys His Ile Pro Ala
 1 5 10 15
 Arg Ala Gly Gln Ala Pro Ala Leu Thr Thr Pro Pro Pro Cys Phe Glu
 20 25 30
 Pro Val Glu Gln Arg Ala Pro Ala Pro Gln Leu Ile Pro Leu Cys His
 35 40 45
 Ile Arg Ala Ser Ser His Ala Val Pro Ser Ala Trp Val Ala Phe Ser
 50 55 60
 Pro Ser Ala Trp Val Thr Val His Thr Thr Gly His Phe Pro Gln Gly
 65 70 75 80
 Arg Ala Leu Thr Ala His Thr Pro Lys His Ala Pro Cys Ser Ser Ile
 85 90 95

<210> 125
 <211> 280
 <212> DNA
 <213> Homo sapiens

<400> 125
 ccatggacct ggccagccac catcacctgc ctctgectc acccaccctg ggtgcctgcc
 60
 ggcaaggatt ggagggcaga ctgctggagc gtgagaccag gccaatctgt ctttctggga
 120
 accttcagcc tccaactgga gctgactgtc aactttcggg tgagaagtca cttttctgca
 180
 ttcccaccac actatctatc tgtgcaatac ggcagcgtga cagcactcac cttattgagg
 240
 gcttctgctg tcctggccca ttctggatag gcctgatcta
 280

<210> 126
 <211> 92
 <212> PRT
 <213> Homo sapiens

<400> 126
 Met Asp Leu Ala Ser His His His Leu Pro Pro Ala Ser Pro Thr Leu

```

      1           5           10           15
Gly Ala Cys Arg Gln Gly Leu Glu Gly Arg Leu Leu Glu Arg Glu Thr
      20           25           30
Arg Pro Ile Cys Leu Ser Gly Asn Leu Gln Pro Pro Thr Gly Ala Asp
      35           40           45
Cys Gln Leu Ser Gly Glu Lys Ser Leu Phe Cys Ile Pro Thr Thr Leu
      50           55           60
Ser Ile Cys Ala Ile Arg Gln Arg Asp Ser Thr His Leu Ile Glu Gly
      65           70           75           80
Phe Cys Cys Pro Gly Pro Phe Trp Ile Gly Leu Ile
      85           90

```

<210> 127
 <211> 444
 <212> DNA
 <213> Homo sapiens

```

<400> 127
cgcgatgatcg ccgtggcgga gggccgcggc gccgactcga tcgcccagct gacaaccgag
60
ctgcaaagcc gtcactgccc tgcggagcag atcacgtccg tcagcatcga catgtcgcca
120
gcgttcatca ggggctgcgc cgagcacctg cccaacgcgc gcgtcacctt cgacaagttc
180
cacgtcatcg ggcacgcca tgcggccgtg gacaggatgc gccgcatcga gcagcgcagc
240
gacaagtccc tcaaggggat gcgctggtcg ctgctgaaga accgcgccag cctcaagccc
300
gaggctgccg ccgatctgga tgccctgac gccaggatgg ccactgtgcg caccgcgcgc
360
gcctgggtct acaaggagca gctgcgcgag atcctcgcgc gcaagcagat caacgtggca
420
cgcgacatgc tcaagcactg gtgc
444

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<210> 128
 <211> 148
 <212> PRT
 <213> Homo sapiens

```

<400> 128
Arg Val Ile Ala Val Ala Glu Gly Arg Gly Ala Asp Ser Ile Ala Gln
1           5           10           15
Leu Thr Thr Glu Leu Gln Ser Arg His Cys Pro Ala Glu Gln Ile Thr
      20           25           30
Ser Val Ser Ile Asp Met Ser Pro Ala Phe Ile Arg Gly Cys Ala Glu
      35           40           45
His Leu Pro Asn Ala Arg Val Thr Phe Asp Lys Phe His Val Ile Gly
      50           55           60
His Ala Asn Ala Ala Val Asp Arg Met Arg Arg Ile Glu Gln Arg Ser
      65           70           75           80
Asp Lys Ser Leu Lys Gly Met Arg Trp Ser Leu Leu Lys Asn Arg Ala
      85           90           95
Ser Leu Lys Pro Glu Ala Ala Ala Asp Leu Asp Ala Leu Ile Ala Arg

```

```

          100          105          110
Met Ala Thr Val Arg Thr Ala Arg Ala Trp Val Tyr Lys Glu Gln Leu
          115          120          125
Arg Glu Ile Leu Ala Arg Lys Gln Ile Asn Val Ala Arg Asp Met Leu
          130          135          140
Lys His Trp Cys
145

```

```

<210> 129
<211> 291
<212> DNA
<213> Homo sapiens

```

```

<400> 129
gaggaggac gtaccgtccc cggtatagcc aagctcgaga agccgcaagc tatcgagaac
60
ttggacgaga ttattgacgt ctttgacgcc gtcattggtg cccgtggcga tatggccgtc
120
gagtgccgcg tcgaggaagt tccgctgate caaaagcaga tcatcgagaa ggctcgttta
180
caggctaagc ccgtcattgt ggccaccagc atgcttgagt cgatgatcca cgctccccgt
240
ccgacccgcg ctgaggccgc cgacgtcgcg aacgccatcc ttgacggcgc g
291

```

```

<210> 130
<211> 97
<212> PRT
<213> Homo sapiens

```

```

<400> 130
Glu Glu Gly Arg Thr Val Pro Val Ile Ala Lys Leu Glu Lys Pro Gln
1      5      10      15
Ala Ile Glu Asn Leu Asp Glu Ile Ile Asp Val Phe Asp Ala Val Met
20     25     30
Val Ala Arg Gly Asp Met Ala Val Glu Cys Pro Leu Glu Glu Val Pro
35     40     45
Leu Ile Gln Lys Gln Ile Ile Glu Lys Ala Arg Leu Gln Ala Lys Pro
50     55     60
Val Ile Val Ala Thr Gln Met Leu Glu Ser Met Ile His Ala Pro Arg
65     70     75     80
Pro Thr Arg Ala Glu Ala Ala Asp Val Ala Asn Ala Ile Leu Asp Gly
85     90     95
Ala

```

```

<210> 131
<211> 416
<212> DNA
<213> Homo sapiens

```

```

<400> 131
tccggagcgt ccgtggccct catgggtgtg tcagcgtggt tgctgtctcg ggccgcagag
60

```

attccaccgg tgctctacct ggaggccgca gccgtcgggg ttcgattctt cggcatctcc
 120
 cgcggtgtct tccgctacgc cgaacgtctg gtaggccacg acctggctct gcggatgcag
 180
 ggggcattgc ggatgcgggt ctacgaccgg ctgtcacgta ccnaccctgc tgggnnacgt
 240
 cgccggggtg acctgctggt acgggttact gccgacgtcg acgcggtggt ggacatggtc
 300
 gtgcgggtga tcgttcgggc gtgcgcgtca agcctcgtca tcattggcac cacggctcct
 360
 ctttgtccga gagaagggtg agttttctta gccggattcc aacacagcct gggggc
 416

<210> 132

<211> 126

<212> PRT

<213> Homo sapiens

<400> 132

Ser	Gly	Ala	Ser	Val	Ala	Leu	Met	Gly	Val	Ser	Ala	Trp	Leu	Leu	Ser
1				5					10					15	
Arg	Ala	Ala	Glu	Ile	Pro	Pro	Val	Leu	Tyr	Leu	Glu	Ala	Ala	Ala	Val
			20					25					30		
Gly	Val	Arg	Phe	Phe	Gly	Ile	Ser	Arg	Gly	Val	Phe	Arg	Tyr	Ala	Glu
		35				40					45				
Arg	Leu	Val	Gly	His	Asp	Leu	Ala	Leu	Arg	Met	Gln	Gly	Ala	Leu	Arg
	50					55					60				
Met	Arg	Val	Tyr	Asp	Arg	Leu	Ser	Arg	Thr	Xaa	Pro	Ala	Gly	Xaa	Arg
65					70					75				80	
Arg	Arg	Gly	Asp	Leu	Leu	Val	Arg	Val	Thr	Ala	Asp	Val	Asp	Ala	Val
				85					90					95	
Leu	Asp	Met	Val	Val	Arg	Val	Ile	Val	Pro	Ala	Cys	Ala	Ser	Ser	Leu
			100					105					110		
Val	Ile	Ile	Gly	Thr	Thr	Val	Leu	Leu	Cys	Pro	Arg	Glu	Gly		
			115				120						125		

<210> 133

<211> 327

<212> DNA

<213> Homo sapiens

<400> 133

gccgttgcta tcgctgctgg tatgcgtgca gacgtcactg tttttgatat caatatcgct
 60
 gcgttgaaga gactcgcga catctaccag ggctgtgttc acacagtagt atccaccgcg
 120
 gccgaaattg cgaaggcgct agaaaccgct gacgttgatga tcggttctgt ccttattccg
 180
 ggtagttcta ccccgaagct tggtactacc gatatgggtg ctacatgca gcctgggtct
 240
 gttcttattg atattgctat agaccaaggc ggctgcttcg aggattcgca cccaccact
 300
 tacgatgacc ccactttcac tgtgcac
 327

<210> 134
 <211> 109
 <212> PRT
 <213> Homo sapiens

<400> 134
 Ala Val Ala Ile Ala Ala Gly Met Arg Ala Asp Val Thr Val Phe Asp
 1 5 10 15
 Ile Asn Ile Ala Ala Leu Lys Arg Leu Ala Asp Ile Tyr Gln Gly Arg
 20 25 30
 Val His Thr Val Val Ser Thr Arg Ala Glu Ile Ala Lys Ala Leu Glu
 35 40 45
 Thr Ala Asp Val Val Ile Gly Ser Val Leu Ile Pro Gly Ser Ser Thr
 50 55 60
 Pro Lys Leu Val Thr Thr Asp Met Val Ala His Met Gln Pro Gly Ser
 65 70 75 80
 Val Leu Ile Asp Ile Ala Ile Asp Gln Gly Gly Cys Phe Glu Asp Ser
 85 90 95
 His Pro Thr Thr Tyr Asp Asp Pro Thr Phe Thr Val His
 100 105

<210> 135
 <211> 560
 <212> DNA
 <213> Homo sapiens

<400> 135
 taagatgtgg tccctgccctg ttcctgaagg ggctgcagct ctgatggaaa atacagggat
 60
 ttacactcag ggctacagcc acggggggct gaggcccaag gctgcaatct cgggggaagg
 120
 ggaagttggc ttttctggt ggattggaaa catcctcttg gaggcaaaga cttttcttg
 180
 atcttacaga ctccccgga tttttagatt agaattattgg gggcaaagga ggctgtcttg
 240
 ttttaaagca atgctacata gacacagtgg ggaagacctg gttcgacggc agataagcag
 300
 tgggtgatgg gcttgaggag gagagtcagg gcaaagtcta agactgagca gaaaggaatt
 360
 ccccatctc ccatggataa gtacgttcta gaacattctc tttgggtcta atactctgaa
 420
 atgacatctt gtcttcatgc tcgagagaga attacttcac tggctccact tggagtgcc
 480
 gtgttcagac accaagcctg actgggaggg ttccgttttc ttaacacctt cccaccgccg
 540
 acttccaagt cccacgcgt
 560

<210> 136
 <211> 100
 <212> PRT
 <213> Homo sapiens

<400> 136

```

Met Trp Ser Cys Pro Val Pro Glu Gly Ala Ala Ala Leu Met Glu Asn
 1           5           10           15
Thr Gly Ile Tyr Thr Gln Gly Tyr Ser His Gly Gly Leu Arg Pro Lys
          20           25           30
Ala Ala Ile Ser Gly Glu Gly Glu Val Gly Phe Ser Trp Trp Ile Gly
          35           40           45
Asn Ile Leu Leu Glu Ala Lys Thr Phe Pro Gly Ser Tyr Arg Leu Pro
 50           55           60
Gly Ile Phe Arg Leu Glu Tyr Trp Gly Gln Arg Arg Leu Ser Cys Phe
65           70           75           80
Lys Ala Met Leu His Arg His Ser Gly Glu Asp Leu Val Arg Arg Gln
          85           90           95
Ile Ser Ser Gly
          100

```

<210> 137

<211> 429

<212> DNA

<213> Homo sapiens

<400> 137

```

accggttgga tggcctgcag gccaaagcgt tcctgcaaac tcagcaggcc ttcagcgcaa
60
gaggcaaaca gctggtcgcg cacctgcttg aggtccaccg attgcgcata gcccttgagc
120
aaggcgcgcc agttggtttt gtcggccact tggctgcgga acaggtcttc gacaaaaccg
180
gactgctggc gggtcgcaac gcgcataatc ggcagcgcct ggctggcgcc ctggtcgagc
240
cagcgcgtcg gcagttgggt ggcccgggtg ataccgacct tgatccccga cgaattggcc
300
aggtacacca catggtcggt catgcagaat gtttcgcccc agccgggata acggcaagtg
360
ccggcgtcgt aatggcaacg ttccgggctc atgatgcaca ggtcacactg ggccagcttg
420
gtcatgccc
429

```

<210> 138

<211> 141

<212> PRT

<213> Homo sapiens

<400> 138

```

Met Thr Lys Leu Ala Gln Cys Asp Leu Cys Ile Met Ser Pro Glu Arg
 1           5           10           15
Cys His Tyr Asp Ala Gly Thr Cys Arg Asp Pro Gly Trp Gly Glu Thr
          20           25           30
Phe Cys Met Thr Asp His Val Val Tyr Leu Ala Asn Ser Ser Gly Ile
          35           40           45
Lys Val Gly Ile Thr Arg Ala Thr Gln Leu Pro Thr Arg Trp Leu Asp
 50           55           60
Gln Gly Ala Ser Gln Ala Leu Pro Ile Met Arg Val Ala Thr Arg Gln

```

```

65          70          75          80
Gln Ser Gly Phe Val Glu Asp Leu Phe Arg Ser Gln Val Ala Asp Lys
          85          90          95
Thr Asn Trp Arg Ala Leu Leu Lys Gly Asp Ala Gln Ser Val Asp Leu
          100          105          110
Lys Gln Val Arg Asp Gln Leu Phe Ala Ser Cys Ala Glu Gly Leu Leu
          115          120          125
Ser Leu Gln Glu Arg Phe Gly Leu Gln Ala Ile Gln Pro
          130          135          140

```

<210> 139
 <211> 341
 <212> DNA
 <213> Homo sapiens

```

<400> 139
acgcgtcggt tgaaggcttg atccgcacgt ccaattcgct ttgcgccaat gcgccgcagc
60
ttgtgaacag cagaatcaag ccgctggtaa atcttctctg gagcttcata ggccgggatg
120
ctacacgagc tggggagaca ctttgaaccc ggaattgtct gaataattct gtctcaaacc
180
tttgcagcct gtaacgactg agggttcgga tggaaaaaca catgctccag gatgggaccg
240
acggccactt caccgatctc ttcatagccc tggcgtttgt agaaatccag gtagcgcgaa
300
tcgccagcgt cgagcacgac gcctgatgag tgcgggtcat t
341

```

<210> 140
 <211> 113
 <212> PRT
 <213> Homo sapiens

```

<400> 140
Met Thr Arg Thr His Gln Ala Ser Cys Ser Thr Leu Ala Ile Arg Ala
1          5          10          15
Thr Trp Ile Ser Thr Asn Ala Arg Ala Met Lys Arg Ser Val Lys Trp
          20          25          30
Pro Ser Val Pro Ser Trp Ser Met Cys Phe Ser Ile Arg Thr Leu Ser
          35          40          45
Arg Tyr Arg Leu Gln Arg Phe Glu Thr Glu Leu Phe Arg Gln Phe Arg
          50          55          60
Val Gln Ser Val Ser Pro Ala Arg Val Ala Ser Pro Pro Met Lys Leu
65          70          75          80
Pro Gly Arg Phe Thr Ser Gly Leu Ile Leu Leu Phe Thr Ser Cys Gly
          85          90          95
Ala Leu Ala Gln Ser Glu Leu Asp Val Arg Ile Lys Pro Ser Asn Asp
          100          105          110
Ala

```

<210> 141
 <211> 324

<212> DNA

<213> Homo sapiens

<400> 141

gaattcctct tggatagctt cgggtaaattg ggtacagcaa atatcaggag cgcaaccgca
 60
 acctttactt actggtacat gaacaccatt tacattacag ctatcgtact caccaccacgt
 120
 catgtgaaca gacacataac tgaaaggttt ataaaccaca gtctcacggt acgtatgacc
 180
 gtcaactgtg aacaccgcta agtaatagcc tgcgggggct tgcatagaact cctttgacca
 240
 tgcgtaataa atacgtccgt cattagtcac acctgatggg gcgaacaaaa aagaacggca
 300
 gcagttatca ccgcccatac gcgt
 324

<210> 142

<211> 106

<212> PRT

<213> Homo sapiens

<400> 142

Met	Gly	Gly	Asp	Asn	Cys	Cys	Arg	Ser	Phe	Cys	Phe	Ala	Pro	Ser	Gly
1				5					10					15	
Val	Thr	Asn	Asp	Gly	Arg	Ile	Tyr	Tyr	Ala	Trp	Ser	Lys	Glu	Phe	Met
			20					25					30		
Gln	Ala	Pro	Ala	Gly	Tyr	Tyr	Leu	Ala	Val	Phe	Thr	Val	Asp	Gly	His
		35					40					45			
Thr	Tyr	Arg	Glu	Thr	Val	Val	Tyr	Lys	Pro	Phe	Ser	Tyr	Val	Ser	Val
		50				55					60				
His	Met	Thr	Trp	Gly	Glu	Tyr	Asp	Ser	Cys	Asn	Val	Asn	Gly	Val	His
65					70					75				80	
Val	Pro	Val	Ser	Lys	Gly	Cys	Gly	Cys	Ala	Pro	Asp	Ile	Cys	Cys	Thr
				85					90					95	
His	Leu	Pro	Glu	Ala	Ile	Gln	Glu	Glu	Phe						
			100					105							

<210> 143

<211> 1325

<212> DNA

<213> Homo sapiens

<400> 143

nacgcgtgga tctgccagct gagcctggag ctgtgcaggc agctgccctg ctacgatgag
 60
 gcaccccagg agaagaactt cctgtacaaa tgcataggca ccaccctggg tgctgcttca
 120
 agtaaggagg tggtgaggaa gcaccttcaa gagctgctgg agacggccag ataccaggag
 180
 gaggcagaac gcgagggcct cgctgctgc ttcgggatct gtgccatctc ccacctcgag
 240
 gacacgctgg ccagctgga ggacttcgtg aggtcagagg tcttcagaaa atccattggc
 300

attctcaaca tttttaagga tcgaagtgag aacgaagtgg agaaggtgaa gagtgctctg
 360
 atcctgtgct atgggcacgt ggcggcccg gccccccggg agctggtgct ggccaaggta
 420
 gagtcagaca tcctccggaa catcntgcca gcacttcagc acnncaagga cccagccctg
 480
 aagctgtgcc ttgtccagag tgtgtgcatg gtcagccgag ccatctgcag cagcaccag
 540
 gctggctcct tccacttcac ccggaaagca gagctggtgg cacagatgat ggagttcatc
 600
 agggcagagc ccccgactc cttgaggaca cctattcgga agaaagccat gtcacactgc
 660
 acttacttgg tctccgtgga gccagcgctg gacgagcagg cccgggcgga tgtgatccat
 720
 ggctgcctgc acagcatcat ggccctgctg cctgagccca aggaggagga cggaggctgc
 780
 cagaagtccc tgtatctgga gacactgcac gcccttgagg atctgctgac gagcctcctg
 840
 cagcggaaca tgacccccca aggcctgcag atcatgattg agcacctgag cccatggatc
 900
 aagtcctcaa gaggtcacgt agcggcgctg gccctaggcc tgagcgccct cctcgtgcgc
 960
 tacttcctgg agcacctgcg tgtcagtggc gcccaagtag ataccaggtt tccatctgag
 1020
 cccaggatcc tgtgcaatgg ccctggtgcc cttccacaac ctgggccttc tcatcgccct
 1080
 cttctcccca cgggtgtgcgg acctgtggcc tgccaccgc caggaggccg tggactgtgt
 1140
 ctactccctg ctgtacctcc agctcggtta tgagggcttc tcccgggact accgcgatga
 1200
 cgtggcgag cggctcctca gcctcaagga cggcctcgtg caccctgacc ccgccattct
 1260
 cttccacacc tgccacagtg taggccagat tattgccaag cgccctcccc cagcccttca
 1320
 cgcgt
 1325

<210> 144

<211> 390

<212> PRT

<213> Homo sapiens

<400> 144

Xaa	Ala	Trp	Ile	Cys	Gln	Leu	Ser	Leu	Glu	Leu	Cys	Arg	Gln	Leu	Pro
1				5					10					15	
Cys	Tyr	Asp	Glu	Ala	Pro	Gln	Glu	Lys	Asn	Phe	Leu	Tyr	Lys	Cys	Ile
			20					25					30		
Gly	Thr	Thr	Leu	Gly	Ala	Ala	Ser	Ser	Lys	Glu	Val	Val	Arg	Lys	His
			35				40						45		
Leu	Gln	Glu	Leu	Leu	Glu	Thr	Ala	Arg	Tyr	Gln	Glu	Glu	Ala	Glu	Arg
			50				55				60				
Glu	Gly	Leu	Ala	Cys	Cys	Phe	Gly	Ile	Cys	Ala	Ile	Ser	His	Leu	Glu
65					70				75					80	
Asp	Thr	Leu	Ala	Gln	Leu	Glu	Asp	Phe	Val	Arg	Ser	Glu	Val	Phe	Arg

```
<210> 145
<211> 802
<212> DNA
<213> Homo sapiens
```

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<400> 145
cgccgctcta ggtccggctc agtgcgctgt tgctcgccgt agaacacgag gtcgcaag
60
cataagcaga cgtagagagt ggtcacatcc atgtcgatgg tgtgcgcgta atgaaggctt
120
acatcaccct ggtgaaggcc tgcaccacta gcgtcggcac catttccccg cgtcggacaa
180
gacatcatgc cccatatctt gacagaatgt ctgacatgag tatgccacgc cgagcagcac
240
```

cagaggacga caccgatctg gcggacgccg cccgttcacg gcgcagatac ctcacccctg
 300
 tcatttggtg cggtatcgtc gctgtcctcg gactaggcat tttcgggtat cttgcgtggt
 360
 ggtcattgtg cgatcaagct gccggggtct gtcagcgtgg tgaacccggt atgtactggt
 420
 gttcgggtgg ctctctggcc attctcggac tcattatcgg ggtcttgacg cagatctggc
 480
 tggagaagcg ctggtggcac atgcttgcca tcgtcatccc ggctgttttc atcgtcgccg
 540
 gtatcttttt ctggctcgcc gtctaagaag gggcgtcaca gattccacaa acgacacagg
 600
 tattgatctc cgttttatcg gctcctagca gccgtggtca acgtatcgct atcaagcgat
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<210> 146

<211> 151

<212> PRT

<213> Homo sapiens

<400> 146

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			20					25					30		
Met	Ser	Asp	Met	Ser	Met	Pro	Arg	Arg	Ala	Ala	Pro	Glu	Asp	Asp	Thr
		35					40					45			
Asp	Leu	Ala	Asp	Ala	Ala	Arg	Ser	Trp	Arg	Arg	Tyr	Leu	Ile	Leu	Val
	50					55					60				
Ile	Cys	Gly	Val	Ile	Val	Ala	Val	Leu	Gly	Leu	Gly	Ile	Phe	Gly	Tyr
65					70				75					80	
Leu	Ala	Trp	Trp	Ser	Leu	Cys	Asp	Gln	Ala	Ala	Gly	Val	Cys	Gln	Arg
				85					90					95	
Gly	Glu	Pro	Val	Met	Tyr	Trp	Cys	Ser	Val	Val	Ser	Leu	Ala	Ile	Leu
			100					105					110		
Gly	Leu	Ile	Ile	Gly	Val	Leu	Thr	Gln	Ile	Trp	Leu	Glu	Lys	Arg	Trp
		115					120					125			
Trp	His	Met	Leu	Ala	Ile	Val	Ile	Pro	Ala	Val	Phe	Ile	Val	Ala	Gly
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<210> 147

<211> 368

<212> DNA

<213> Homo sapiens

<400> 147

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 180
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 240
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 368

<210> 148

<211> 117

<212> PRT

<213> Homo sapiens

<400> 148

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Thr	Gln	Trp	Ala	Leu	Val	Ala	Arg	Asp	Val	His	Asp	Ile	Pro	Gly	Leu
			20					25					30		
Arg	Lys	Val	Ile	Gly	Gln	Lys	Val	Pro	Cys	Val	Ala	Val	Thr	Gly	Ser
		35					40					45			
Glu	Lys	Val	Leu	His	Lys	Lys	Asp	Tyr	Trp	Asp	Leu	Ala	Thr	Pro	Met
	50					55					60				
Pro	Ile	Ala	Trp	Gly	Thr	Thr	Asp	Arg	Thr	Val	Ile	Ala	Asp	Ala	Arg
65					70				75					80	
Arg	Thr	Ile	Pro	Thr	Thr	Glu	Trp	Asp	Ile	Leu	Ala	Arg	Leu	Arg	Pro
			85						90				95		
Arg	Leu	Glu	Glu	Val	Arg	Lys	Gln	Arg	Asn	Asp	Val	Leu	Leu	Leu	Asn
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<210> 149

<211> 407

<212> DNA

<213> Homo sapiens

<400> 149

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<210> 150
 <211> 135
 <212> PRT
 <213> Homo sapiens

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 Ser Ser Val Val Ile Trp His Asp Ala Val Asp Gly Ile Val Tyr Arg
 35 40 45
 Ser Ala Asp Glu Gly Lys Ser Trp Ala Pro Ile Lys Gly Pro Glu Gln
 50 55 60
 Gly Gln Ala His Leu Phe Val Leu His Pro Tyr Asp Lys Thr Gln Ala
 65 70 75 80
 Tyr Ile Leu Thr Arg Ser Thr Gln His Trp Arg Thr Ser Asn Arg Gly
 85 90 95
 Glu Thr Trp Gln Ser Phe Ser Thr Pro His Pro Pro Thr Thr Leu Lys
 100 105 110
 Ala Met Pro Leu Asp Phe His Pro Thr His His Asp Trp Ile Leu Phe
 115 120 125
 Thr Gly Gln Ala Cys Thr Val
 130 135

<210> 151
 <211> 448
 <212> DNA
 <213> Homo sapiens

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 180
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<210> 152

<211> 149
 <212> PRT
 <213> Homo sapiens

<400> 152
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 35 40 45
 Cys Pro Val Ser Ala Pro Pro Ser Ser Pro Pro Glu Gly Lys Thr Trp
 50 55 60
 Ala Leu Arg Glu Pro Cys Gly Met Phe Phe Val Ile Asn Cys Thr Ser
 65 70 75 80
 Ala Ser Thr Ala Arg Pro Arg Ala Lys Ser Arg Val Ser Gly Pro Trp
 85 90 95
 Ser Lys Leu Arg Leu Ser Ala Ala Thr Ser Gly Gly Gln Gly Glu Gly
 100 105 110
 Phe Ala Ala Glu Thr Ala Ala Ser Gln His Arg Ala Ile Leu Gly Cys
 115 120 125
 Ser Pro Pro Arg Gly Ala His Gly Lys Pro Ala Pro Gly Gly Arg Gly
 130 135 140
 Cys Met Asp Ile Arg
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<210> 153
 <211> 440
 <212> DNA
 <213> Homo sapiens

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 300
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 440

<210> 154
 <211> 69
 <212> PRT
 <213> Homo sapiens

<400> 154

Gly Arg His Ala Gly Val Cys Pro Ser Val Cys Pro Trp Val His Val
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 Cys Val Cys Ile Cys Gly Gly Thr Gly Val Cys Pro Ser Val Cys Met
 20 25 30
 Gly Pro Cys Ile Cys Val Tyr Ile Cys Gly Asp Met Tyr Met Cys Val
 35 40 45
 Cys Met Asn Arg Cys Lys Trp Gly Ala Leu Arg Cys Val Cys Val Cys
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 Ser Cys Thr Arg Val
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<210> 155

<211> 344

<212> DNA

<213> Homo sapiens

<400> 155

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 180
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 240
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 344

<210> 156

<211> 92

<212> PRT

<213> Homo sapiens

<400> 156

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 20 25 30
 Gln Arg His Ser Asp Asn Ala Pro Gln Glu Val Lys Ser Ser Leu Ser
 35 40 45
 Asp His Gly Arg Arg Ala Ser Ala Gln Gly Glu Leu Gly Thr Ser Gln
 50 55 60
 Ala Thr Pro Pro Arg Ser Met Pro Pro Pro Val Ser Ser Ala Ser Ser
 65 70 75 80
 Thr Ser Pro Leu Pro Ile Ser Ile Ile Ser Asp Leu
 85 90

<210> 157

<211> 6816

<212> DNA

<213> Homo sapiens

<400> 157
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120
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240
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<210> 158

<211> 1572

<212> PRT

<213> Homo sapiens

<400> 158

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			20					25					30		
Asp	Phe	Arg	Lys	Pro	Glu	Lys	Met	Ala	Lys	Leu	Pro	Val	Ile	Leu	Gly
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Val	Asn	Ser	Ser	Tyr	Ile	Pro	Thr	Lys	Gln	Phe	Glu	Thr	Cys	Ser	Lys
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Thr	Pro	Ile	Thr	Phe	Glu	Val	Glu	Glu	Phe	Val	Pro	Cys	Ile	Pro	Lys
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Ile	Ala	Ile	Cys	Ile	Glu	Phe	Lys	Asp	Ser	Asp	Glu	Glu	Asp	Ser	Gln
			130			135					140				
Pro	Leu	Lys	Cys	Ile	Tyr	Gly	Arg	Pro	Gly	Gly	Pro	Val	Phe	Thr	Arg
145				150					155					160	
Ser	Ala	Phe	Ala	Ala	Val	Leu	His	His	His	Gln	Asn	Pro	Glu	Phe	Tyr
			165					170					175		
Asp	Glu	Ile	Lys	Ile	Glu	Leu	Pro	Thr	Gln	Leu	His	Glu	Lys	His	His
			180					185					190		
Leu	Leu	Leu	Thr	Phe	Phe	His	Val	Ser	Cys	Asp	Asn	Ser	Ser	Lys	Gly
			195				200					205			
Ser	Thr	Lys	Lys	Arg	Asp	Val	Val	Glu	Thr	Gln	Val	Gly	Tyr	Ser	Trp
			210			215					220				
Leu	Pro	Leu	Leu	Lys	Asp	Gly	Arg	Val	Val	Thr	Ser	Glu	Gln	His	Ile
225				230					235					240	
Pro	Val	Ser	Ala	Asn	Leu	Pro	Ser	Gly	Tyr	Leu	Gly	Tyr	Gln	Glu	Leu
			245					250					255		
Gly	Met	Gly	Arg	His	Tyr	Gly	Pro	Glu	Ile	Lys	Trp	Val	Asp	Gly	Gly

	260		265		270										
Lys	Pro	Leu	Leu	Lys	Ile	Ser	Thr	His	Leu	Val	Ser	Thr	Val	Tyr	Thr
	275						280					285			
Gln	Asp	Gln	His	Leu	His	Asn	Phe	Phe	Gln	Tyr	Cys	Gln	Lys	Thr	Glu
	290					295					300				
Ser	Gly	Ala	Gln	Ala	Leu	Gly	Asn	Glu	Leu	Val	Lys	Tyr	Leu	Lys	Ser
305					310					315					320
Leu	His	Ala	Met	Glu	Gly	His	Val	Met	Ile	Ala	Phe	Leu	Pro	Thr	Ile
			325						330					335	
Leu	Asn	Gln	Leu	Phe	Arg	Val	Leu	Thr	Arg	Ala	Thr	Gln	Glu	Glu	Val
	340							345					350		
Ala	Val	Asn	Val	Thr	Arg	Val	Ile	His	Val	Val	Ala	Gln	Cys	His	
	355					360					365				
Glu	Glu	Gly	Leu	Glu	Ser	His	Leu	Arg	Ser	Tyr	Val	Lys	Tyr	Ala	Tyr
	370				375						380				
Lys	Ala	Glu	Pro	Tyr	Val	Ala	Ser	Glu	Tyr	Lys	Thr	Val	His	Glu	Glu
385					390					395				400	
Leu	Thr	Lys	Ser	Met	Thr	Thr	Ile	Leu	Lys	Pro	Ser	Ala	Asp	Phe	Leu
			405					410					415		
Thr	Ser	Asn	Lys	Leu	Leu	Lys	Tyr	Ser	Trp	Phe	Phe	Phe	Asp	Val	Leu
	420							425					430		
Ile	Lys	Ser	Met	Ala	Gln	His	Leu	Ile	Glu	Asn	Ser	Lys	Val	Lys	Leu
	435					440					445				
Leu	Arg	Asn	Gln	Arg	Phe	Pro	Ala	Ser	Tyr	His	His	Ala	Val	Glu	Thr
	450				455					460					
Val	Val	Asn	Met	Leu	Met	Pro	His	Ile	Thr	Gln	Lys	Phe	Arg	Asp	Asn
465				470						475				480	
Pro	Glu	Ala	Ser	Lys	Asn	Ala	Asn	His	Ser	Leu	Ala	Val	Phe	Ile	Lys
			485					490					495		
Arg	Cys	Phe	Thr	Phe	Met	Asp	Arg	Gly	Phe	Val	Phe	Lys	Gln	Ile	Asn
	500							505					510		
Asn	Tyr	Ile	Ser	Cys	Phe	Ala	Pro	Gly	Asp	Pro	Lys	Thr	Leu	Phe	Glu
	515					520						525			
Tyr	Lys	Phe	Glu	Phe	Leu	Arg	Val	Val	Cys	Asn	His	Glu	His	Tyr	Ile
	530				535						540				
Pro	Leu	Asn	Leu	Pro	Met	Pro	Phe	Gly	Lys	Gly	Arg	Ile	Gln	Arg	Tyr
545				550						555				560	
Gln	Asp	Leu	Gln	Leu	Asp	Tyr	Ser	Leu	Thr	Asp	Glu	Phe	Cys	Arg	Asn
			565					570					575		
His	Phe	Leu	Val	Gly	Leu	Leu	Leu	Arg	Glu	Val	Gly	Thr	Ala	Leu	Gln
	580							585					590		
Glu	Phe	Arg	Glu	Val	Arg	Leu	Ile	Ala	Ile	Ser	Val	Leu	Lys	Asn	Leu
	595					600					605				
Leu	Ile	Lys	His	Ser	Phe	Asp	Asp	Arg	Tyr	Ala	Ser	Arg	Ser	His	Glu
	610				615					620					
Ala	Arg	Ile	Ala	Thr	Leu	Tyr	Leu	Pro	Leu	Phe	Gly	Leu	Leu	Ile	Glu
625				630						635				640	
Asn	Val	Gln	Arg	Ile	Asn	Val	Arg	Asp	Val	Ser	Pro	Phe	Pro	Val	Asn
			645					650					655		
Ala	Gly	Met	Thr	Val	Lys	Asp	Glu	Ser	Leu	Ala	Leu	Pro	Ala	Val	Asn
	660							665					670		
Pro	Leu	Val	Thr	Pro	Gln	Lys	Gly	Ser	Thr	Leu	Asp	Asn	Ser	Leu	His
	675					680					685				
Lys	Asp	Leu	Leu	Gly	Ala	Ile	Ser	Gly	Ile	Ala	Ser	Pro	Tyr	Thr	Thr

690	695	700
Ser Thr Pro Asn Ile Asn Ser Val Arg Asn Ala Asp Ser Arg Gly Ser		
705	710	715
Leu Ile Ser Thr Asp Ser Gly Asn Ser Leu Pro Glu Arg Asn Ser Glu		
725	730	735
Lys Ser Asn Ser Leu Asp Lys His Gln Gln Ser Ser Thr Leu Gly Asn		
740	745	750
Ser Val Val Arg Cys Asp Lys Leu Asp Gln Ser Glu Ile Lys Ser Leu		
755	760	765
Leu Met Cys Phe Leu Tyr Ile Leu Lys Ser Met Ser Asp Asp Ala Leu		
770	775	780
Phe Thr Tyr Trp Asn Lys Ala Ser Thr Ser Glu Leu Met Asp Phe Phe		
785	790	795
Thr Ile Ser Glu Val Cys Leu His Gln Phe Gln Tyr Met Gly Lys Arg		
805	810	815
Tyr Ile Ala Arg Thr Gly Met Met His Ala Arg Leu Gln Gln Leu Gly		
820	825	830
Ser Leu Asp Asn Ser Leu Thr Phe Asn His Ser Tyr Gly His Ser Asp		
835	840	845
Ala Asp Val Leu His Gln Ser Leu Leu Glu Ala Asn Ile Ala Thr Glu		
850	855	860
Val Cys Leu Thr Ala Leu Asp Thr Leu Ser Leu Phe Thr Leu Ala Phe		
865	870	875
Lys Asn Gln Leu Leu Ala Asp His Gly His Asn Pro Leu Met Lys Lys		
885	890	895
Val Phe Asp Val Tyr Leu Cys Phe Leu Gln Lys His Gln Ser Glu Thr		
900	905	910
Ala Leu Lys Asn Val Phe Thr Ala Leu Arg Ser Leu Ile Tyr Lys Phe		
915	920	925
Pro Ser Thr Phe Tyr Glu Gly Arg Ala Asp Met Cys Ala Ala Leu Cys		
930	935	940
Tyr Glu Ile Leu Lys Cys Asn Ser Lys Leu Ser Ser Ile Arg Thr		
945	950	955
Glu Ala Ser Gln Leu Leu Tyr Phe Leu Met Arg Asn Asn Phe Asp Tyr		
965	970	975
Thr Gly Lys Lys Ser Phe Val Arg Thr His Leu Gln Val Ile Ile Ser		
980	985	990
Val Ser Gln Leu Ile Ala Asp Val Val Gly Ile Gly Gly Thr Arg Phe		
995	1000	1005
Gln Gln Ser Leu Ser Ile Ile Asn Asn Cys Ala Asn Ser Asp Arg Leu		
1010	1015	1020
Ile Lys His Thr Ser Phe Ser Ser Asp Val Lys Asp Leu Thr Lys Arg		
1025	1030	1035
Ile Arg Thr Val Leu Met Ala Thr Ala Gln Met Lys Glu His Glu Asn		
1045	1050	1055
Asp Pro Glu Met Leu Val Asp Leu Gln Tyr Ser Leu Ala Lys Ser Tyr		
1060	1065	1070
Ala Ser Thr Pro Glu Leu Arg Lys Thr Trp Leu Asp Ser Met Ala Arg		
1075	1080	1085
Ile His Val Lys Asn Gly Asp Leu Ser Glu Ala Ala Met Cys Tyr Val		
1090	1095	1100
His Val Thr Ala Leu Val Ala Glu Tyr Leu Thr Arg Lys Glu Ala Val		
1105	1110	1115
Gln Trp Glu Pro Pro Leu Leu Pro His Ser His Ser Ala Cys Leu Arg		

1125 1130 1135
 Arg Ser Arg Gly Gly Val Phe Arg Gln Gly Cys Thr Ala Phe Arg Val
 1140 1145 1150
 Ile Thr Pro Asn Ile Asp Glu Glu Ala Ser Met Met Glu Asp Val Gly
 1155 1160 1165
 Met Gln Asp Val His Phe Asn Glu Asp Val Leu Met Glu Leu Leu Glu
 1170 1175 1180
 Gln Cys Ala Asp Gly Leu Trp Lys Ala Glu Arg Tyr Glu Leu Ile Ala
 1185 1190 1195 1200
 Asp Ile Tyr Lys Leu Ile Ile Pro Ile Tyr Glu Lys Arg Arg Asp Phe
 1205 1210 1215
 Glu Arg Leu Ala His Leu Tyr Asp Thr Leu His Arg Ala Tyr Ser Lys
 1220 1225 1230
 Val Thr Glu Val Met His Ser Gly Arg Arg Leu Leu Gly Thr Tyr Phe
 1235 1240 1245
 Arg Val Ala Phe Phe Gly Gln Ala Ala Gln Tyr Gln Phe Thr Asp Ser
 1250 1255 1260
 Glu Thr Asp Val Glu Gly Phe Phe Glu Asp Glu Asp Gly Lys Glu Tyr
 1265 1270 1275 1280
 Ile Tyr Lys Glu Pro Lys Leu Thr Pro Leu Ser Glu Ile Ser Gln Arg
 1285 1290 1295
 Leu Leu Lys Leu Tyr Ser Asp Lys Phe Gly Ser Glu Asn Val Lys Met
 1300 1305 1310
 Ile Gln Asp Ser Gly Lys Val Asn Pro Lys Asp Leu Asp Ser Lys Tyr
 1315 1320 1325
 Ala Tyr Ile Gln Val Thr His Val Ile Pro Phe Phe Asp Glu Lys Glu
 1330 1335 1340
 Leu Gln Glu Arg Lys Thr Glu Phe Glu Arg Ser His Asn Ile Arg Arg
 1345 1350 1355 1360
 Phe Met Phe Glu Met Pro Phe Thr Gln Thr Gly Lys Arg Gln Gly Gly
 1365 1370 1375
 Val Glu Glu Gln Cys Lys Arg Arg Thr Ile Leu Thr Ala Ile His Cys
 1380 1385 1390
 Phe Pro Tyr Val Lys Lys Arg Ile Pro Val Met Tyr Gln His His Thr
 1395 1400 1405
 Asp Leu Asn Pro Ile Glu Val Ala Ile Asp Glu Met Ser Lys Lys Val
 1410 1415 1420
 Ala Glu Leu Arg Gln Leu Cys Ser Ser Ala Glu Val Asp Met Ile Lys
 1425 1430 1435 1440
 Leu Gln Leu Lys Leu Gln Gly Ser Val Ser Val Gln Val Asn Ala Gly
 1445 1450 1455
 Pro Leu Ala Tyr Ala Arg Ala Phe Leu Asp Asp Thr Asn Thr Lys Arg
 1460 1465 1470
 Tyr Pro Asp Asn Lys Val Lys Leu Leu Lys Glu Val Phe Arg Gln Phe
 1475 1480 1485
 Val Glu Ala Cys Gly Gln Ala Leu Ala Val Asn Glu Arg Leu Ile Lys
 1490 1495 1500
 Glu Asp Gln Leu Glu Tyr Gln Glu Glu Met Lys Ala Asn Tyr Arg Glu
 1505 1510 1515 1520
 Met Ala Lys Glu Leu Ser Glu Ile Met His Glu Gln Ile Cys Pro Leu
 1525 1530 1535
 Glu Glu Lys Thr Ser Val Leu Pro Asn Ser Leu His Ile Phe Asn Ala
 1540 1545 1550
 Ile Ser Gly Thr Pro Thr Ser Thr Met Val His Gly Met Thr Ser Ser

1555
Ser Ser Val Val
1570

1560

1565

<210> 159
<211> 540
<212> DNA
<213> Homo sapiens

<400> 159
gccggctctg ccatgtgctt actctgagcc acctaacctc ggcgtgcttc agtttactca
60
tccgctcatc tgcagaatgg gtgatgctgt cggtacttcg tggcatacag gaaagtgcc
120
agcatgggtca gcctcagtga gaggtggcca gtggggagtg gtggccactg tacacctggc
180
acagcccaga gatgcattgt ccactctgtt gtgtgcttca accaaggggc gctctggcag
240
ggcttgggtg ggacttccca aagggcatgg aaaagttccc agtcaatgag atccatggag
300
acccatggga gtgggggtca gcccagcct aagaggaccc ccagccctgc cctgtgcccc
360
aggacacacc aggcaactgtc ccttgtcgcc ttcccagaca acctgtaccc tccaggccac
420
cagttctcgt ccatgacaaa gaaaggagcc ttctaaataa gtgcccgccca gaggtgcac
480
gcttcctgc cccttcggg tggacctggg tttcaaagag aagctgccag tgcaacgcgt
540

<210> 160
<211> 110
<212> PRT
<213> Homo sapiens

<400> 160
Met Val Ser Leu Ser Glu Arg Trp Pro Val Gly Ser Gly Gly His Cys
1 5 10 15
Thr Pro Gly Thr Ala Gln Arg Cys Met Cys His Ser Val Val Cys Phe
20 25 30
Asn Gln Gly Ala Leu Trp Gln Gly Leu Gly Thr Ser Gln Arg Ala
35 40 45
Trp Lys Ser Ser Gln Ser Met Arg Ser Met Glu Thr His Gly Ser Gly
50 55 60
Gly Gln Pro Gln Pro Lys Arg Thr Pro Ser Pro Ala Leu Cys Pro Arg
65 70 75 80
Thr His Gln Ala Leu Ser Leu Val Ala Phe Pro Asp Asn Leu Tyr Pro
85 90 95
Pro Gly His Gln Phe Ser Ser Met Thr Lys Lys Gly Ala Phe
100 105 110

<210> 161
<211> 351
<212> DNA
<213> Homo sapiens

<400> 161

nnacgcgtac gtcttttcggc cgaagaagga acgtgggcag gggcctcctt cgctggccgc
 60
 cgcgcttggc tcgcagcgac gatgaagggc gacgacagca gcaagatcac ccacaagatc
 120
 gcccgggcga agcgcgaggg ccgcgtatgg tggagctttg agtacttccc gccgcgcacg
 180
 ccgcagggca tgcagaattt gtatgaccgt atcgagcgca tgagtcagct gggccccgag
 240
 tttgtggaca ttacgtggaa tgccgggggc cggacgtcgg atatgacgac gcagctggtc
 300
 aagacggtgc atgcgtactt tgggtgctgag acgtgcatgc atctgacgtg c
 351

<210> 162

<211> 117

<212> PRT

<213> Homo sapiens

<400> 162

Xaa Arg Val Arg Leu Ser Ala Glu Glu Gly Thr Trp Ala Gly Ala Ser
 1 5 10 15
 Phe Ala Gly Arg Arg Ala Trp Leu Ala Ala Thr Met Lys Gly Asp Asp
 20 25 30
 Ser Ser Lys Ile Thr His Lys Ile Ala Arg Ala Lys Arg Glu Gly Arg
 35 40 45
 Val Trp Trp Ser Phe Glu Tyr Phe Pro Pro Arg Thr Pro Gln Gly Met
 50 55 60
 Gln Asn Leu Tyr Asp Arg Ile Glu Arg Met Ser Gln Leu Gly Pro Glu
 65 70 75 80
 Phe Val Asp Ile Thr Trp Asn Ala Gly Gly Arg Thr Ser Asp Met Thr
 85 90 95
 Thr Gln Leu Val Lys Thr Val His Ala Tyr Phe Gly Val Glu Thr Cys
 100 105 110
 Met His Leu Thr Cys
 115

<210> 163

<211> 360

<212> DNA

<213> Homo sapiens

<400> 163

gcgtgctcca tcggcacctt gcagatgggc gaattcgtg aaaacgtcgc cggtagcgctc
 60
 gacacctaca ccctgcgtca gcccatcggc gtatgcgcag gcatcactcc gttcaacttc
 120
 ccggcgatga ttccactgtg gatgttcccc atggcgattg cctgcggtaa cactttcgtg
 180
 ctcaaaccgt ccgaacaaga ccctctgtcg acgatgctgc tggtagaact ggcgctggaa
 240
 gccggtgtgc cggccggcgt gctcaacgtg gtgcacggcg gcaaggatgt ggtggatgag
 300

ctgtgcaccc ataaagatat caaggcagtt tctttcgtcg gttcgaccgc cgttggtacc
360

<210> 164

<211> 120

<212> PRT

<213> Homo sapiens

<400> 164

Ala	Cys	Ser	Ile	Gly	Thr	Leu	Gln	Met	Gly	Glu	Phe	Ala	Glu	Asn	Val
1				5					10					15	
Ala	Gly	Gly	Val	Asp	Thr	Tyr	Thr	Leu	Arg	Gln	Pro	Ile	Gly	Val	Cys
			20					25					30		
Ala	Gly	Ile	Thr	Pro	Phe	Asn	Phe	Pro	Ala	Met	Ile	Pro	Leu	Trp	Met
		35					40					45			
Phe	Pro	Met	Ala	Ile	Ala	Cys	Gly	Asn	Thr	Phe	Val	Leu	Lys	Pro	Ser
	50					55					60				
Glu	Gln	Asp	Pro	Leu	Ser	Thr	Met	Leu	Leu	Val	Glu	Leu	Ala	Leu	Glu
65					70					75				80	
Ala	Gly	Val	Pro	Ala	Gly	Val	Leu	Asn	Val	Val	His	Gly	Gly	Lys	Asp
				85					90					95	
Val	Val	Asp	Ala	Leu	Cys	Thr	His	Lys	Asp	Ile	Lys	Ala	Val	Ser	Phe
			100					105					110		
Val	Gly	Ser	Thr	Ala	Val	Gly	Thr								
			115				120								

<210> 165

<211> 728

<212> DNA

<213> Homo sapiens

<400> 165

gctagcagcc ttcacctcc tagaggggca ggctcggcga caaggggagg ggggtgccccg
60
tcccagcgag ggacgcccgg ggctgggggt gccggtcgag cccggggcaa cagcttcacc
120
aagtttgga accgcaacgt cttcatgaag gacaacagct cttcttcag cacagactcc
180
cgctcccgt cctcctccag gtccccgacg cgccacttcc gcagaagtga ctcccactca
240
gactccgaca gtcctactc agggaatgag tgtcaccctg tgggccgcag gaaccgccc
300
cctaagggcc ggggcggtcg aggggccc atggatcggg gccgaggcag ggcgcagcgt
360
gggaagaggc acgatctggc gccaccaag cgcagtcgaa agaagatggc ggcgctggag
420
tgtgaggacc cggagcgaga gctgaagaag cagaagcggg cagcccgtt ccagcacgga
480
cactcccgcc gcctgcgct cgagcccctg gtgctgcaga tgagcagcct ggagagcagt
540
ggggctgacc ctgactggca ggagctgcag atcgtgggca cctgccctga catcaccaag
600
cactacctgc gcctcacctg tgccccgac ccgtccaccg tgccgctgt ggcattccct
660

gtggcaggtt ttgaaaaagt cgctgtgcat ggtcaagtgc cactggaaag agaagcagga
 720
 ctacgcgt
 728

<210> 166
 <211> 242
 <212> PRT
 <213> Homo sapiens

<400> 166
 Ala Ser Ser Leu His Pro Pro Arg Gly Ala Gly Ser Ala Thr Arg Gly
 1 5 10 15
 Gly Gly Ala Pro Ser Gln Arg Gly Thr Pro Gly Ala Gly Gly Ala Gly
 20 25 30
 Arg Ala Arg Gly Asn Ser Phe Thr Lys Phe Gly Asn Arg Asn Val Phe
 35 40 45
 Met Lys Asp Asn Ser Ser Ser Ser Thr Asp Ser Arg Ser Arg Ser
 50 55 60
 Ser Ser Arg Ser Pro Thr Arg His Phe Arg Arg Ser Asp Ser His Ser
 65 70 75 80
 Asp Ser Asp Ser Ser Tyr Ser Gly Asn Glu Cys His Pro Val Gly Arg
 85 90 95
 Arg Asn Pro Pro Pro Lys Gly Arg Gly Gly Arg Gly Ala His Met Asp
 100 105 110
 Arg Gly Arg Gly Arg Ala Gln Arg Gly Lys Arg His Asp Leu Ala Pro
 115 120 125
 Thr Lys Arg Ser Arg Lys Lys Met Ala Ala Leu Glu Cys Glu Asp Pro
 130 135 140
 Glu Arg Glu Leu Lys Lys Gln Lys Arg Ala Ala Arg Phe Gln His Gly
 145 150 155 160
 His Ser Arg Arg Leu Arg Leu Glu Pro Leu Val Leu Gln Met Ser Ser
 165 170 175
 Leu Glu Ser Ser Gly Ala Asp Pro Asp Trp Gln Glu Leu Gln Ile Val
 180 185 190
 Gly Thr Cys Pro Asp Ile Thr Lys His Tyr Leu Arg Leu Thr Cys Ala
 195 200 205
 Pro Asp Pro Ser Thr Val Arg Pro Val Ala Phe Pro Val Ala Gly Phe
 210 215 220
 Glu Lys Val Ala Val His Gly Gln Val Pro Leu Glu Arg Glu Ala Gly
 225 230 235 240
 Leu Arg

<210> 167
 <211> 510
 <212> DNA
 <213> Homo sapiens

<400> 167
 nnacgcgtgg aaccagaact caggcccggtg tgaggagtct gggttggaac acacggggcc
 60
 gcaacacaga attgtcaggt cctgtgccgt gaccaccaac cctcggggcca tgccaggtgc
 120

tgggtgagggg caggtggctc ccgccaggcg cctgctggcc tgaccgcact ccgtccacag
 180
 gtcctcatgg gcgtcctccg gctgggcttc gtgtccgcct acctctcaca gccactgctc
 240
 gatggctttg ccatgggggc ctccgtgacc atcctgacct cgcagctcaa acacctgtgtg
 300
 ggcgtgcgga tcccgcgga ccagggggcc ggcattgttg tctcacatg gctgagcctg
 360
 ctgcgcggcg ccgggcaggc caacgtgtgc gacgtgggtca ccagcacggt gtgcctggcg
 420
 gtgctgctag ccgcgaagga gctctcagac cgctaccgac accgcctgag ggtgccgctg
 480
 cccacggagc tgctgggtcat cgtgggtggc
 510

<210> 168
 <211> 128
 <212> PRT
 <213> Homo sapiens

<400> 168
 Gly Ala Gly Gly Ser Arg Gln Ala Pro Ala Gly Leu Thr Ala Leu Arg
 1 5 10 15
 Pro Gln Val Leu Met Gly Val Leu Arg Leu Gly Phe Val Ser Ala Tyr
 20 25 30
 Leu Ser Gln Pro Leu Leu Asp Gly Phe Ala Met Gly Ala Ser Val Thr
 35 40 45
 Ile Leu Thr Ser Gln Leu Lys His Leu Leu Gly Val Arg Ile Pro Arg
 50 55 60
 His Gln Gly Pro Gly Met Val Val Leu Thr Trp Leu Ser Leu Leu Arg
 65 70 75 80
 Gly Ala Gly Gln Ala Asn Val Cys Asp Val Val Thr Ser Thr Val Cys
 85 90 95
 Leu Ala Val Leu Leu Ala Ala Lys Glu Leu Ser Asp Arg Tyr Arg His
 100 105 110
 Arg Leu Arg Val Pro Leu Pro Thr Glu Leu Leu Val Ile Val Val Ala
 115 120 125

<210> 169
 <211> 537
 <212> DNA
 <213> Homo sapiens

<400> 169
 gaattccacc gcattgtcgtg tctggacgta tgtaggtcgc ggtagtgtgc gaccgccggt
 60
 gccttaaagg agagcgggca tcggcggttc agtacgagag gggaaggtgt gcggatactt
 120
 attgtcgggtg cggcatcgtc catccacacc gttcgatggg tcaatggact ggtcaagcgg
 180
 ggtcacgagg ttcacctggc atcagtcctat ccggcggggc gtcactccat tgatccccga
 240
 gttcggatcc acctggcccc acacggcggg aaggcaaaat acgtcgtcaa tgccgggtgg
 300

ctgcgatcag tggcggctgg ggtgcaacct gacatcgtca acgtccacta tgcgaccggt
 360
 tatgggtctgc tcgctcgtct tgcccatatt gacgccccga cgctgctgtc ggtgtgggga
 420
 agtgacgttt acgattcccc ccgggcaaatt cccctcatgc gtcacatggt ccgatccaac
 480
 ttggtctcag ctactcggat cgcacgcaca agccactgca tggcgcgtgt cacgcgt
 537

<210> 170
 <211> 164
 <212> PRT
 <213> Homo sapiens

<400> 170
 Cys Ala Thr Ala Gly Ala Leu Lys Glu Ser Gly His Arg Arg Cys Ser
 1 5 10 15
 Thr Arg Gly Glu Gly Val Arg Ile Leu Ile Val Gly Ala Ala Ser Ser
 20 25 30
 Ile His Thr Val Arg Trp Val Asn Gly Leu Val Lys Arg Gly His Glu
 35 40 45
 Val His Leu Ala Ser Val His Pro Ala Gly Arg His Ser Ile Asp Pro
 50 55 60
 Arg Val Arg Ile His Leu Ala Pro His Gly Gly Lys Ala Lys Tyr Val
 65 70 75 80
 Val Asn Ala Gly Trp Leu Arg Ser Val Ala Ala Gly Val Gln Pro Asp
 85 90 95
 Ile Val Asn Val His Tyr Ala Thr Gly Tyr Gly Leu Leu Ala Arg Leu
 100 105 110
 Ala His Ile Asp Ala Pro Thr Leu Leu Ser Val Trp Gly Ser Asp Val
 115 120 125
 Tyr Asp Ser Pro Arg Ala Asn Pro Leu Met Arg His Met Val Arg Ser
 130 135 140
 Asn Leu Val Ser Ala Thr Arg Ile Ala Ser Thr Ser His Cys Met Ala
 145 150 155 160
 Arg Val Thr Arg

<210> 171
 <211> 391
 <212> DNA
 <213> Homo sapiens

<400> 171
 ctagacaagc tcgcgcgggt gggcttcgac actcttggtc tacagacctt cctaactgcg
 60
 ggggagaagg agtccccgcgc atggacgatt cacaagggcg acaccgcccc tgaggctgct
 120
 ggcgtcatcc ataccgactt ccagaagggg ttcacaaagg cccagggtgt gtccttcggc
 180
 gaccttgttg aatttggcgg cgaaaaggag gccaggtgtg ctgggaagct gcggttggag
 240
 ggcaaggagt acgttatgca ggacggtgac gtagtggagt tccgatttaa cgtgtagctc
 300

tggtttgata cttacttggc ttaaccgcat ctgagatccg tcatatcttt ggcgtagcct
 360
 tattggtatg aataacatgc cgtagccaaa g
 391

<210> 172
 <211> 98
 <212> PRT
 <213> Homo sapiens

<400> 172
 Leu Asp Lys Leu Ala Arg Val Gly Phe Asp Thr Leu Gly Leu Gln Thr
 1 5 10 15
 Phe Leu Thr Ala Gly Glu Lys Glu Ser Arg Ala Trp Thr Ile His Lys
 20 25 30
 Gly Asp Thr Ala Pro Glu Ala Ala Gly Val Ile His Thr Asp Phe Gln
 35 40 45
 Lys Gly Phe Ile Lys Ala Gln Val Val Ser Phe Gly Asp Leu Val Glu
 50 55 60
 Phe Gly Gly Glu Lys Glu Ala Gln Ala Ala Gly Lys Leu Arg Leu Glu
 65 70 75 80
 Gly Lys Glu Tyr Val Met Gln Asp Gly Asp Val Val Glu Phe Arg Phe
 85 90 95
 Asn Val

<210> 173
 <211> 309
 <212> DNA
 <213> Homo sapiens

<400> 173
 ccatggagtgc tcccttgtgc gagcattttg agagctatac caacacccat ccctgcagggt
 60
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Ala	Thr	Ala	Gly	Pro	Arg	Ala	Gly	Ala	Gln	Asp	Ala	Leu	Pro	Arg	Ser

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 1265 1270 1275 1280
 Pro Val Gly Thr His Glu Phe Thr Val Glu Gln Cys Phe Gly Asp Gly
 1285 1290 1295
 Leu His Trp Ala Gly Cys Met Ile Ile Val Leu Leu Gly Gln Gln Arg
 1300 1305 1310
 Arg Phe Ala Val Leu Asp Phe Cys Tyr His Leu Leu Lys Val Gln Lys
 1315 1320 1325
 His Asp Gly Lys Asp Glu Ile Ile Lys Asn Val Pro Leu Lys Lys Met
 1330 1335 1340
 Val Glu Arg Ile Arg Lys Phe Gln Ile Leu Asn Asp Glu Ile Ile Thr
 1345 1350 1355 1360
 Ile Leu Asp Lys Tyr Leu Lys Ser Gly Asp Gly Glu Gly Thr Pro Val
 1365 1370 1375
 Glu His Val Arg Cys Phe Gln Pro Pro Ile His Gln Ser Leu Ala Ser
 1380 1385 1390
 Ser

<210> 177
 <211> 417
 <212> DNA
 <213> Homo sapiens

<400> 177
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 60
 gcagttcgtg gcgcgcatag tttctggcat gtttcgcgca tcctggagac cgatcccgcc
 120
 gctgccgtga aaccgcctaa aaatgtgaag cgattgcca aagccgtgtc cgtggagcaa
 180
 atgcaaaagc tccttgccat acccagtctt aagactccta ccggcctgcg taatcgagcg
 240
 atacttgagt tcttatatgc taccggcgcg cgcgtagagc agatgctggc aacagacctg
 300
 gacgatatac acctggggcga aaaaccccgcg gatgaaaacg gggaatctat tgcacttccc
 360
 gggatatgtc gcctttttgg aaaggagagt aaagagcgtt tagtcccttt gggatcc
 417

<210> 178
 <211> 139
 <212> PRT
 <213> Homo sapiens

<400> 178
 Thr Arg Asp Val Thr Leu Pro Leu Pro Leu Gly Pro Asn Ser Ile Ala
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 Arg Thr Met Ala Ala Val Arg Gly Ala His Ser Phe Trp His Ala Ser
 20 25 30
 Arg Ile Leu Glu Thr Asp Pro Ala Ala Val Lys Pro Pro Lys Asn
 35 40 45
 Val Lys Arg Leu Pro Lys Ala Val Ser Val Glu Gln Met Gln Lys Leu
 50 55 60
 Leu Ala Ile Pro Ser Leu Lys Thr Pro Thr Gly Leu Arg Asn Arg Ala
 65 70 75 80
 Ile Leu Glu Phe Leu Tyr Ala Thr Gly Ala Arg Val Ser Glu Met Leu
 85 90 95
 Ala Thr Asp Leu Asp Asp Ile His Leu Gly Glu Lys Pro Arg Asp Glu
 100 105 110
 Asn Gly Glu Ser Ile Ala Leu Pro Gly Tyr Val Arg Leu Phe Gly Lys
 115 120 125
 Gly Gly Lys Glu Arg Leu Val Pro Leu Gly Ser
 130 135

<210> 179
 <211> 362
 <212> DNA
 <213> Homo sapiens

<400> 179
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 120
 ccattggggcc gggcagcccg aatccaaaat gtcggggcac gccagtgagg agtatggtaa
 180
 ggggcccggca ccgatgttgg nggcagcata cggatggaag tgctgggcga gcgcctgggt
 240
 ttgccggcag agcaactggg gcagctcaag gcgggcgggg tgatcgagca gttggattga
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 gcaatggcgg ccgcgaagcc cgccatttac cttgatgact gtttagcgcg cggattcttt
 360
 aa
 362

<210> 180
 <211> 108
 <212> PRT
 <213> Homo sapiens

<400> 180
 Met Ala Gly Phe Ala Ala Ile Ala Gln Ser Asn Cys Ser Ile Thr
 1 5 10 15
 Pro Pro Ala Leu Ser Cys Pro Ser Cys Ser Ala Gly Lys Pro Arg Arg
 20 25 30
 Ser Pro Ser Thr Ser Ile Arg Met Leu Pro Pro Thr Ser Val Pro Ala
 35 40 45
 Pro Tyr His Thr Pro Thr Gly Arg Ala Pro Thr Phe Trp Ile Arg Ala
 50 55 60
 Ala Arg Pro Asn Gly Glu Phe Pro Asp Ser Trp Gly Cys Gly Ile Phe
 65 70 75 80
 His His Gln Pro Thr Gly Asn His Leu Arg Leu Phe Gln Gly Leu Arg
 85 90 95
 Asp Val Ile Asp Arg Pro His Arg His Leu Arg Arg
 100 105

<210> 181
 <211> 297
 <212> DNA
 <213> Homo sapiens

<400> 181
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 ccgattcact tgtcgggtaca ggccaatacg gtgaattggg ccagcgtcga gttctggcaa
 120
 cagcaaggta tctgccgggt aatcctgtcg cggaattgt cactggaaga aatcggcgaa
 180
 atccgccaac aggtgccggc catggagctg gaagtgtttg tgcacgggtc cctgtacatg
 240
 gcctattccg ggcgtgttt gttgtccggc tatatgaaca agcgcgatgc caaccaa
 297

<210> 182
 <211> 99
 <212> PRT

<213> Homo sapiens

<400> 182

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Ala Leu Ile Met Ser Asp Pro Gly Leu Ile Met Leu Val Arg Arg His
 1           5           10           15
Phe Pro Cys Met Pro Ile His Leu Ser Val Gln Ala Asn Thr Val Asn
          20           25           30
Trp Ala Ser Val Glu Phe Trp Gln Gln Gln Gly Ile Cys Arg Val Ile
          35           40           45
Leu Ser Arg Glu Leu Ser Leu Glu Glu Ile Gly Glu Ile Arg Gln Gln
          50           55           60
Val Pro Ala Met Glu Leu Glu Val Phe Val His Gly Ala Leu Tyr Met
          65           70           75           80
Ala Tyr Ser Gly Arg Cys Leu Leu Ser Gly Tyr Met Asn Lys Arg Asp
          85           90           95
Ala Asn Gln

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<210> 183

<211> 351

<212> DNA

<213> Homo sapiens

<400> 183

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attccgttta acatcgtctc ccaggcgact catccattcc ttcgtacctt ggacgatgtc
120
aagcgcacat ctttggcgac cgacgggctc ggccaccagg tctgtctcaa gggctaccag
180
gccgagggcc acgactacgc acaccccgac tacggcggca acgtctccca ccgtgccggc
240
gggatgaagg atctcgagaa gctcaccgag tcgggcaggc agtgaacac cgatttcggc
300
attcacgtca acctggtgga gtcctatcct gaggcgaatc acttcggcga c
351

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<210> 184

<211> 117

<212> PRT

<213> Homo sapiens

<400> 184

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Arg Asp Val Thr Met Lys Pro Thr Gly Ser Gly Asp Val Ala Asn Lys
 1           5           10           15
Val Ile Thr His Ile Pro Phe Asn Ile Val Ser Gln Ala Thr His Pro
          20           25           30
Phe Leu Arg Thr Leu Asp Asp Val Lys Arg Ile Ser Leu Ala Thr Asp
          35           40           45
Gly Leu Gly His Gln Val Leu Lys Gly Tyr Gln Ala Glu Gly His
          50           55           60
Asp Tyr Ala His Pro Asp Tyr Gly Gly Asn Val Ser His Arg Ala Gly
          65           70           75           80
Gly Met Lys Asp Leu Glu Lys Leu Thr Glu Ser Gly Arg Gln Trp Asn

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85 90 95
 Thr Asp Phe Gly Ile His Val Asn Leu Val Glu Ser Tyr Pro Glu Ala
 100 105 110
 Asn His Phe Gly Asp
 115

<210> 185
 <211> 396
 <212> DNA
 <213> Homo sapiens

<400> 185
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 60
 gctgttggtg gcattgtggt ttatgcaggc catgaaacca aagcaatgct gaacaacagt
 120
 gggccacggt ataagcgag caaattagaa agaagagcaa acacagatgt cctctggtgt
 180
 gtcatgcttc tggtcataat gtgcttaact ggcgagtag gtcattgaat ctggctgagc
 240
 aggtatgaaa agatgcattt tttcaatggt cccgagcctg atggacatat catatcacca
 300
 ctggtggcag gattttatat gttttggacc gtgatcattt tggtacaggt cttgattcct
 360
 atttctctct atgtttccat cgaaattgtg aagctt
 396

<210> 186
 <211> 132
 <212> PRT
 <213> Homo sapiens

<400> 186
 Arg Val Gly Leu Ser Lys Glu Asn Leu Leu Arg Gly Cys Thr Ile
 1 5 10 15
 Arg Asn Thr Glu Ala Val Val Gly Ile Val Val Tyr Ala Gly His Glu
 20 25 30
 Thr Lys Ala Met Leu Asn Asn Ser Gly Pro Arg Tyr Lys Arg Ser Lys
 35 40 45
 Leu Glu Arg Arg Ala Asn Thr Asp Val Leu Trp Cys Val Met Leu Leu
 50 55 60
 Val Ile Met Cys Leu Thr Gly Ala Val Gly His Gly Ile Trp Leu Ser
 65 70 75 80
 Arg Tyr Glu Lys Met His Phe Phe Asn Val Pro Glu Pro Asp Gly His
 85 90 95
 Ile Ile Ser Pro Leu Leu Ala Gly Phe Tyr Met Phe Trp Thr Val Ile
 100 105 110
 Ile Leu Leu Gln Val Leu Ile Pro Ile Ser Leu Tyr Val Ser Ile Glu
 115 120 125
 Ile Val Lys Leu
 130

<210> 187
 <211> 423

<212> DNA

<213> Homo sapiens

<400> 187

cgagtgtca ccgcgtcagc cgtcatgcgt cccactgagg ctgttgtctc tcggtcggca
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 gaacctcgac gagttcagcg gacacctggac cagcgcgagt gggctggcgt cttcgttgct
 120
 gatgagcatc gtcgtttgct tggcacggtc ggcgatcaag aggtcatcga ggctgctcgc
 180
 cgcgagagatc gcagtattgc tgacgcggtg gaaactaacg gcacctcac ggcgcggacc
 240
 gacactccgt tgtccgagct cttcgtccg accagcaacg ccagggtgcc gttggccggt
 300
 gtcgacgagg acttcacact catgggtgtc atctctcggg tgacctgct cgacgcgatg
 360
 tcacgagctc gcgacgaggc aggagagggg tctgtcatgt ccttgagaa caccggaaag
 420
 ctt
 423

<210> 188

<211> 141

<212> PRT

<213> Homo sapiens

<400> 188

Arg	Val	Leu	Thr	Ala	Ser	Ala	Val	Met	Arg	Pro	Thr	Glu	Ala	Val	Val
1				5				10					15		
Ser	Arg	Ser	Ala	Glu	Pro	Arg	Arg	Val	Gln	Arg	Ile	Leu	Asp	Gln	Arg
		20					25					30			
Glu	Trp	Ala	Gly	Val	Phe	Val	Val	Asp	Glu	His	Arg	Arg	Leu	Leu	Gly
	35					40					45				
Thr	Val	Gly	Asp	Gln	Glu	Val	Ile	Glu	Ala	Ala	Arg	Arg	Gly	Asp	Arg
	50					55					60				
Ser	Ile	Ala	Asp	Ala	Val	Glu	Thr	Asn	Gly	Ile	Leu	Thr	Ala	Arg	Thr
65				70					75				80		
Asp	Thr	Pro	Leu	Ser	Glu	Leu	Phe	Ala	Pro	Thr	Ser	Asn	Ala	Arg	Val
		85						90					95		
Pro	Leu	Ala	Val	Val	Asp	Glu	Asp	Phe	His	Leu	Met	Gly	Val	Ile	Ser
		100					105						110		
Arg	Val	Thr	Leu	Leu	Asp	Ala	Met	Ser	Arg	Ala	Arg	Asp	Glu	Ala	Gly
		115					120					125			
Glu	Gly	Ser	Val	Met	Ser	Leu	Glu	Asn	Thr	Gly	Lys	Leu			
	130					135					140				

<210> 189

<211> 429

<212> DNA

<213> Homo sapiens

<400> 189

ngatgggttta ccaacatatg cacgggttcga gcggaatag ctctcgggg gctggcagtg
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aaatgtttga agatgccggc gtttcgggcc tcaacttggt tcatgcccgt gggtccaccg
 120
 atttcgccga tgcggctcat cgcacgggta agaagtttcg tccagataac ccaggacaga
 180
 gcaaggtata tcaggctcag aaccaggaaa agcaggggctt taccacagtg ccccatatag
 240
 accgcgctag ctacggcaaa aggcgcgccc agtgggggtcc aggacagcac tttcatggct
 300
 gaaggagcg catcccnagc ttcgcctagc cccagagcta acccagcgac cagtggacca
 360
 gcgcccata tcatgtagaa ccctacgata atcagccctt gttttacccc tggaatggag
 420
 ctgatttcn
 429

<210> 190

<211> 123

<212> PRT

<213> Homo sapiens

<400> 190

Met	Met	Gly	Ala	Gly	Pro	Leu	Val	Ala	Gly	Leu	Ala	Leu	Gly	Leu	Gly
1				5					10					15	
Glu	Ala	Xaa	Asp	Ala	Leu	Pro	Ser	Ala	Met	Lys	Val	Leu	Ser	Trp	Thr
			20					25					30		
Pro	Leu	Gly	Ala	Pro	Phe	Ala	Val	Ala	Ser	Ala	Val	Tyr	Met	Gly	His
		35				40					45				
Trp	Gly	Lys	Ala	Leu	Leu	Phe	Leu	Val	Leu	Ser	Leu	Ile	Tyr	Leu	Ala
	50				55					60					
Leu	Ser	Trp	Val	Ile	Trp	Thr	Lys	Leu	Leu	Asn	Arg	Ala	Met	Ser	Arg
65				70					75					80	
Ile	Gly	Glu	Ile	Gly	Gly	Thr	Thr	Ala	Ser	Lys	Gln	Val	Glu	Ala	Gly
			85					90					95		
Asn	Ala	Gly	Ile	Phe	Lys	His	Phe	Thr	Ala	Ser	Pro	Arg	Gly	Ala	Ile
		100						105					110		
Ala	Ala	Arg	Thr	Val	His	Met	Leu	Val	Asn	His					
		115					120								

<210> 191

<211> 4845

<212> DNA

<213> Homo sapiens

<400> 191

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 cctccggctt ctgcctccgg ccaggagttc tggccccggc aatcggcggc cgatattctg
 120
 tcgggggagg cttcccgag acggtatctt ctgtatgacg tcaaccccc ggaaggcttc
 180
 aacctgcgca gggatgtcta tatccgaatc gcctctctcc tgaagactct gctgaagacg
 240
 gaggagtggg tgcttgctct gcctccatgg ggccgcctct atcactggca gactcctgac
 300

atccaccagg tccggattcc ctggtctgag ttttttgatc ttccaagtct caataaaaaac
360
atccccgtca tcgagtatga gcagttcatc gcagaatctg gtgggccctt tattgaccag
420
gtttacgtcc tgcaaagtta cgcagagggg tggaaagaag ggacctggga agagaagggtg
480
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540
ggatggtttt ggggttatga ggagaccagg ggtctaaacg tctcctgtct gtccgtccag
600
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660
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780
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840
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900
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960
cgcagcctca tgaagacca cgggtggac aaggtgtttg tggccacaga tgccgtcaga
1020
aaggaatatg aagagctaaa aaagctgtta cccgagatgg tgaggtttga acccacgtgg
1080
gaggagctgg agctctacaa ggacggaggc gttgcgatta ttgaccagtg gatctgcgca
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1200
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1320
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1740
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1920

gcgtgcgtct ctgtgggtta gtctgtctct ctctgccc aggaatgctg agcgccctga
1980
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2280
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2460
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 4560
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 4620
 cctatggtgt tactcaaagc tgtgcagggt aaatgatgac atatttattc 4680
 tttttccatt tgttctagaa acagtgcctt tttcatcagt tgcattttcc aggtgagag
 4740
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 4800
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 4845

<210> 192

<211> 428

<212> PRT

<213> Homo sapiens

<400> 192

Pro Pro Gly Ala Met Ala Thr Leu Ser Phe Val Phe Leu Leu Leu Gly
 1 5 10 15
 Ala Val Ser Trp Pro Pro Ala Ser Ala Ser Gly Gln Glu Phe Trp Pro
 20 25 30
 Gly Gln Ser Ala Ala Asp Ile Leu Ser Gly Ala Ala Ser Arg Arg Arg

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<210> 193
<211> 350
<212> DNA
<213> Homo sapiens
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<400> 193

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120
cgtgccagca tcagccccga ggaggtcaag ggcgagacca tgttgatgtt gggcacgggc
180
ccctggtttc cccggggcccg cgggtgggggt ttggcccga tttggcgcgt ttctccagcg
240
ccgttaaggg catacgccgc agtttcgagg gctcgtcgct ggagaccatc aagcacatcg
300
tggcttcggg catggcgtga cgggtgtgcc gcagctgtcc gtgccgcgcg
350

<210> 194

<211> 116

<212> PRT

<213> Homo sapiens

<400> 194

Ala	Gly	Glu	Leu	Asp	Cys	Ala	Ile	Met	Ala	Glu	Pro	Phe	Pro	Asp	Thr
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Gly	Leu	Ala	Thr	Ala	Gln	Leu	Tyr	Asp	Glu	Pro	Phe	Val	Val	Ala	Leu
		20						25					30		
Arg	Ala	Ser	His	Pro	Leu	Ala	Asp	Arg	Ala	Ser	Ile	Ser	Pro	Glu	Glu
		35					40					45			
Val	Lys	Gly	Glu	Thr	Met	Leu	Met	Leu	Gly	Thr	Gly	Pro	Trp	Phe	Pro
	50					55				60					
Arg	Ala	Arg	Gly	Gly	Gly	Leu	Ala	Arg	Ile	Trp	Arg	Val	Ser	Pro	Ala
65					70				75					80	
Pro	Leu	Arg	Ala	Tyr	Ala	Ala	Val	Ser	Arg	Ala	Arg	Arg	Trp	Arg	Pro
				85				90					95		
Ser	Ser	Thr	Ser	Trp	Leu	Arg	Ala	Trp	Arg	Asp	Gly	Gly	Ala	Ala	Ala
			100					105					110		
Val	Arg	Ala	Ala												
			115												

<210> 195

<211> 495

<212> DNA

<213> Homo sapiens

<400> 195

acgcgtgaac gcgacggctt ggcgatcgga ggcgtcggcc ccgtcgttga gtggggcgtt
60
gaaatggttc gcttcgacga aagcgagact ctcgaccgcc ttgcatcggg cgtccttgaa
120
ccagaacttg gcgacgattt ggccgcgcgtc ctgctcgatt ctcatcgggt tgetgtcatc
180
agcgagggat cgaactggct tgccctcgta cccgtgatcg taggtcgcaa cacggaacag
240
tttcgcagca taccagacct tgcccgcgac cggatcgaca aactgcacca gttgagccat
300

cgcgaaatag cagcaaatcg cgagctcctg cgtgcccgcg ctgcgtcggg gcaggtgcgg
 360
 cactgccacg gcgacgcaca cctcggcaac atcgtcatga ttgacggcaa gccggtcctg
 420
 ttcgacgcga tcgaatttga tcctgatatc gcgacaacgg atgtgctgta cgatttcgcg
 480
 ttccctctga tggat
 495

<210> 196
 <211> 165
 <212> PRT
 <213> Homo sapiens

<400> 196
 Thr Arg Glu Arg Asp Gly Leu Ala Ile Gly Gly Val Gly Pro Val Val
 1 5 10 15
 Glu Trp Ala Val Glu Met Val Arg Phe Asp Glu Ser Glu Thr Leu Asp
 20 25 30
 Arg Leu Ala Ser Gly Val Leu Glu Pro Glu Leu Gly Asp Asp Leu Ala
 35 40 45
 Ala Val Leu Leu Asp Ser His Arg Val Ala Val Ile Ser Glu Gly Ser
 50 55 60
 Asn Trp Leu Ala Ser Leu Pro Val Ile Val Gly Arg Asn Thr Glu Gln
 65 70 75 80
 Phe Arg Ser Ile Pro Asp Leu Ala Arg Asp Arg Ile Asp Lys Leu His
 85 90 95
 Gln Leu Ser His Arg Glu Ile Ala Arg Asn Arg Glu Leu Leu Arg Ala
 100 105 110
 Arg Ala Ala Ser Gly Gln Val Arg His Cys His Gly Asp Ala His Leu
 115 120 125
 Gly Asn Ile Val Met Ile Asp Gly Lys Pro Val Leu Phe Asp Ala Ile
 130 135 140
 Glu Phe Asp Pro Asp Ile Ala Thr Thr Asp Val Leu Tyr Asp Phe Ala
 145 150 155 160
 Phe Pro Leu Met Asp
 165

<210> 197
 <211> 402
 <212> DNA
 <213> Homo sapiens

<400> 197
 caagcaatgc ttgacgcagt tgttgaatac ttaccagcac cgactgatat tccagcaatc
 60
 aaaggtatca atccagatga aactgaaggt gaacgtcacg caagcgatga tgagccattc
 120
 tcttcattag cattcaaaat tgcaactgac ccattcgtag gtaacttaac cttcttccgt
 180
 gtgtactcag gtgtaattaa ctctgggtgat acagtattaa actctgtacg tcaaaaacgt
 240
 gaacgttttg gtcgtatcgt acagatgcac gctaataaac gtgaagaaat taaagaagtt
 300

cgtgcgggcg atatcgctgc agcaatcggc ttaaaagatg taactacggg tgaaccatta
 360
 tgtgctgtcg atgcaccaat cattcttgag cgtatggaat tc
 402

<210> 198
 <211> 134
 <212> PRT
 <213> Homo sapiens

<400> 198
 Gln Ala Met Leu Asp Ala Val Val Glu Tyr Leu Pro Ala Pro Thr Asp
 1 5 10 15
 Ile Pro Ala Ile Lys Gly Ile Asn Pro Asp Glu Thr Glu Gly Glu Arg
 20 25 30
 His Ala Ser Asp Asp Glu Pro Phe Ser Ser Leu Ala Phe Lys Ile Ala
 35 40 45
 Thr Asp Pro Phe Val Gly Asn Leu Thr Phe Phe Arg Val Tyr Ser Gly
 50 55 60
 Val Ile Asn Ser Gly Asp Thr Val Leu Asn Ser Val Arg Gln Lys Arg
 65 70 75 80
 Glu Arg Phe Gly Arg Ile Val Gln Met His Ala Asn Lys Arg Glu Glu
 85 90 95
 Ile Lys Glu Val Arg Ala Gly Asp Ile Ala Ala Ala Ile Gly Leu Lys
 100 105 110
 Asp Val Thr Thr Gly Glu Pro Leu Cys Ala Val Asp Ala Pro Ile Ile
 115 120 125
 Leu Glu Arg Met Glu Phe
 130

<210> 199
 <211> 507
 <212> DNA
 <213> Homo sapiens

<400> 199
 acgcgtgaag tcgtgcatag atcgggtgtga catagagaag cctccgaccc aagctgcgta
 60
 tatcgcaaa agaccaagcg accctggacg ttctagacag aactctgcta cgaggcctga
 120
 caatagtga atccccgaga acccagctat ggaagggttt ccagatgctc gaaggcctgt
 180
 cataccagag gttagggttaa actgtatgga gactttcgag gtgaaagttg actcgccggt
 240
 aaagcctgct cctaaagagg atttagatct gatagatcta tcctcagatt caacctcggg
 300
 gcctgaaaa cactctatac tctcaacctc cgacagcgac tctcttgat ttgagcctct
 360
 tcctctctc agaatagtcg agagtgcga agaagaggag acgatgaacc aaggcgatga
 420
 cggccctcc ggtaaaaatg ctgcctcttc tcctccatc cccagccatc cctccgtcct
 480
 cagcctgagc acagctccgc ttgtaca
 507

<210> 200
 <211> 153
 <212> PRT
 <213> Homo sapiens

<400> 200
 Met Glu Gly Glu Glu Ala Ala Phe Leu Pro Glu Gly Pro Ser Ser Pro
 1 5 10 15
 Trp Phe Ile Val Ser Ser Ser Ser Ser Leu Ser Thr Ile Leu Arg Glu
 20 25 30
 Gly Arg Gly Ser Asn Thr Arg Glu Ser Leu Ser Glu Val Glu Ser Ile
 35 40 45
 Glu Cys Phe Ser Gly Pro Glu Val Glu Ser Glu Asp Arg Ser Ile Arg
 50 55 60
 Ser Lys Ser Ser Leu Gly Ala Gly Phe Thr Gly Glu Ser Thr Phe Thr
 65 70 75 80
 Ser Lys Val Ser Ile Gln Phe Asn Leu Thr Ser Gly Met Thr Gly Leu
 85 90 95
 Arg Ala Ser Gly Asn Pro Ser Ile Ala Gly Phe Ser Gly Ile Ser Leu
 100 105 110
 Leu Ser Gly Leu Val Ala Glu Phe Cys Leu Glu Arg Pro Gly Ser Leu
 115 120 125
 Gly Leu Cys Ala Ile Tyr Ala Ala Trp Val Gly Gly Phe Ser Met Ser
 130 135 140
 His Arg Ser Met His Asp Phe Thr Arg
 145 150

<210> 201
 <211> 527
 <212> DNA
 <213> Homo sapiens

<400> 201
 gatgtggcta ttatccctgt ttcccagggtg agaaacaggg tcagtgatag agctgggatg
 60
 tgtgcctgca ggctcaccag ccagtcacct cctcaccaag gatgatgttc tccgtgggtga
 120
 gctgggtcctt ggtctcctgg aactcgtggc gcacctgggc cagctgcgcc tcgaaggcat
 180
 ccttctccat ctctttggct agctgcaagt tctggagctg ctggttgagg tctgtgatct
 240
 catccacctg ctggttgagc gtgcgcttga ggaaggccac aatctccttc ttgttattgg
 300
 ccagctgctc aaactcctgg cggaacatct tctcctgcac agccagctca tcccacttcc
 360
 gctggtaccg ggctagccgg tctccagggt ctcgatctg gatgtggtag aactccttca
 420
 tctccttggc cagaggcggc tccacggcca ccaccggctc cttcttgccc cttttcttct
 480
 tgacttcaag ctcttgctt gccttgctca cactcttttt gggaggc
 527

<210> 202

<211> 70
 <212> PRT
 <213> Homo sapiens

<400> 202
 Gly Arg Pro Gln Ser Pro Ser Cys Tyr Trp Pro Ala Ala Gln Thr Pro
 1 5 10 15
 Gly Gly Thr Ser Ser Pro Ala Gln Pro Ala His Pro Thr Ser Ala Gly
 20 25 30
 Thr Gly Leu Ala Gly Pro Pro Gly Leu Gly Ser Gly Cys Gly Arg Thr
 35 40 45
 Pro Ser Ser Pro Trp Pro Glu Ala Ala Pro Arg Pro Pro Pro Ala Pro
 50 55 60
 Ser Cys Pro Leu Ser Ser
 65 70

<210> 203
 <211> 304
 <212> DNA
 <213> Homo sapiens

<400> 203
 ngtgcaccgg tggatcatgga caacgccgcc tacgtggtct acacctcggg atccaccggc
 60
 cgacccaagg gagttgtcgt caccacacac ggactcgaca gtttcgcact cgaccagcag
 120
 cgtcgattcc acgcagatca ccactctcga accctgcact tcgccacccc cagcttcgac
 180
 ggagccgtct tcgagtacct gcaggcattc ggtgtcggag ccaccatggt gatcgtcccg
 240
 accgacatct acggcggcgc cgaactggca agtctcatcc gccgcgaaca cgtcactcac
 300
 gcgt
 304

<210> 204
 <211> 101
 <212> PRT
 <213> Homo sapiens

<400> 204
 Xaa Ala Pro Val Val Met Asp Asn Ala Ala Tyr Val Val Tyr Thr Ser
 1 5 10 15
 Gly Ser Thr Gly Arg Pro Lys Gly Val Val Val Thr His Thr Gly Leu
 20 25 30
 Asp Ser Phe Ala Leu Asp Gln Gln Arg Arg Phe His Ala Asp His His
 35 40 45
 Ser Arg Thr Leu His Phe Ala Thr Pro Ser Phe Asp Gly Ala Val Phe
 50 55 60
 Glu Tyr Leu Gln Ala Phe Gly Val Gly Ala Thr Met Val Ile Val Pro
 65 70 75 80
 Thr Asp Ile Tyr Gly Ala Glu Leu Ala Ser Leu Ile Arg Arg Glu
 85 90 95
 His Val Thr His Ala

100

<210> 205
 <211> 356
 <212> DNA
 <213> Homo sapiens

<400> 205
 nngaattcag caatgataac tggctcaatt gaaggtgaaga caacaattga gggaattaat
 60
 gcacaattaa atacagtgtt aactttatctt tcaccacaat caaaagataa agatttaatt
 120
 atgccagatc aacaagaaga aatagatatt ctgattgcaa ccgactgtat ttcagaagga
 180
 cagaacttac aagattgtga ttacttaata aactatgaca ttcattggaa tccagttcgt
 240
 atcattcaaa gatttggacg gattgatcga attgggtcga agaataaatg tgtacaatta
 300
 gttaactttt ggccagatat tacattagat gaatatattg atctaaaggg acgcgt
 356

<210> 206
 <211> 118
 <212> PRT
 <213> Homo sapiens

<400> 206
 Xaa Asn Ser Ala Met Ile Thr Gly Ser Ile Glu Gly Lys Thr Thr Ile
 1 5 10 15
 Glu Gly Ile Asn Ala Gln Leu Asn Thr Val Leu Thr Leu Phe Ser Pro
 20 25 30
 Gln Ser Lys Asp Lys Asp Leu Ile Met Pro Asp Gln Gln Glu Glu Ile
 35 40 45
 Asp Ile Leu Ile Ala Thr Asp Cys Ile Ser Glu Gly Gln Asn Leu Gln
 50 55 60
 Asp Cys Asp Tyr Leu Ile Asn Tyr Asp Ile His Trp Asn Pro Val Arg
 65 70 75 80
 Ile Ile Gln Arg Phe Gly Arg Ile Asp Arg Ile Gly Ser Lys Asn Lys
 85 90 95
 Cys Val Gln Leu Val Asn Phe Trp Pro Asp Ile Thr Leu Asp Glu Tyr
 100 105 110
 Ile Asp Leu Lys Gly Arg
 115

<210> 207
 <211> 324
 <212> DNA
 <213> Homo sapiens

<400> 207
 acgcgtgcac tgtgtgtatg catggtaacg tacacgtgtg cactgtgtgt ggtgtgcatg
 60
 catgggtgtg gcacgtgtng cactgtgtgt ggatgcatgg taatgtgcac gtgtgcactg
 120

tgtgtggtgt gtatgcatgg tgtgtgcacg tgtgcactgt gtgtgtgtgt atgcatgtgt
 180
 gtgcacatgt gcactgtgtg gtgtgtatgc atggtgtgtg cacgtgtgca ctgtgtatgc
 240
 atgngtgtgt gcatgtgtgc actgtgtatg catagtgtgc acgtgtgcac tgtgtggtgt
 300
 gtatgcatgg taatgtgcac gtgt
 324

<210> 208

<211> 108

<212> PRT

<213> Homo sapiens

<400> 208

Thr	Arg	Ala	Leu	Cys	Val	Cys	Met	Val	Thr	Tyr	Thr	Cys	Ala	Leu	Cys
1				5				10					15		
Val	Val	Cys	Met	His	Gly	Val	Cys	Thr	Cys	Xaa	Thr	Val	Cys	Gly	Cys
			20					25					30		
Met	Val	Met	Cys	Thr	Cys	Ala	Leu	Cys	Val	Val	Cys	Met	His	Gly	Val
		35					40					45			
Cys	Thr	Cys	Ala	Leu	Cys	Val	Cys	Val	Cys	Met	Cys	Val	His	Met	Cys
		50				55				60					
Thr	Val	Trp	Cys	Val	Cys	Met	Val	Cys	Ala	Arg	Val	His	Cys	Val	Cys
65					70				75					80	
Met	Xaa	Val	Cys	Met	Cys	Ala	Leu	Cys	Met	His	Ser	Val	His	Val	Cys
				85					90					95	
Thr	Val	Trp	Cys	Val	Cys	Met	Val	Met	Cys	Thr	Cys				
			100					105							

<210> 209

<211> 168

<212> DNA

<213> Homo sapiens

<400> 209

nnctccagag gttatgaggt tggaagcccg gtttttttca ggtgcagaaa aggctaccat
 60
 attcaagggt ccacgactcg cacctgcctt gccaatntaa catggagtgg gatacagacc
 120
 gaatgtatac ctcatgcctg cagacagcca gaaaccccg cacacgcg
 168

<210> 210

<211> 56

<212> PRT

<213> Homo sapiens

<400> 210

Xaa	Ser	Arg	Gly	Tyr	Glu	Val	Gly	Ser	Pro	Val	Phe	Phe	Arg	Cys	Arg
1				5				10					15		
Lys	Gly	Tyr	His	Ile	Gln	Gly	Ser	Thr	Thr	Arg	Thr	Cys	Leu	Ala	Asn
			20					25				30			
Leu	Thr	Trp	Ser	Gly	Ile	Gln	Thr	Glu	Cys	Ile	Pro	His	Ala	Cys	Arg

35 40 45
 Gln Pro Glu Thr Pro Ala His Ala
 50 55

<210> 211
 <211> 354
 <212> DNA
 <213> Homo sapiens

<400> 211
 tacatgggct ttgacacagt ggtggctgaa gctgcactaa ggggtgttgg aggcaatgtc
 60
 cagctggcag ctcagaccct tgcacacccat ggaggaagcc tcccacccga cctgcagtgc
 120
 tcaggagagg actcctcccc cacaccgtcc acatccccat ctgactctgc agggacctct
 180
 agtgcctcga cagatgaaga catggagacg gaggtgtca acgaaatcct ggaggacatt
 240
 ccggagcacg aggaggacta cctggactcc acgctggagg atgaagaagt cattattgct
 300
 gaatacttgt cctgcgttga aagtataagt tctgccngca aagaacaact gatac
 354

<210> 212
 <211> 118
 <212> PRT
 <213> Homo sapiens

<400> 212
 Tyr Met Gly Phe Asp Thr Val Val Ala Glu Ala Ala Leu Arg Val Phe
 1 5 10 15
 Gly Gly Asn Val Gln Leu Ala Ala Gln Thr Leu Ala His His Gly Gly
 20 25 30
 Ser Leu Pro Pro Asp Leu Gln Phe Ser Gly Glu Asp Ser Ser Pro Thr
 35 40 45
 Pro Ser Thr Ser Pro Ser Asp Ser Ala Gly Thr Ser Ser Ala Ser Thr
 50 55 60
 Asp Glu Asp Met Glu Thr Glu Ala Val Asn Glu Ile Leu Glu Asp Ile
 65 70 75 80
 Pro Glu His Glu Glu Asp Tyr Leu Asp Ser Thr Leu Glu Asp Glu Glu
 85 90 95
 Val Ile Ile Ala Glu Tyr Leu Ser Cys Val Glu Ser Ile Ser Ser Ala
 100 105 110
 Xaa Lys Glu Gln Leu Ile
 115

<210> 213
 <211> 669
 <212> DNA
 <213> Homo sapiens

<400> 213
 attgcccaat ctcagagtgt ccaggaaagc ctggagagcc tgttgcagtc tattggggaa
 60

gttgaacaaa acctggaagg gaaacaggtg tcatcactct catcaggagt catccaggaa
 120
 gccttagcca caaatatgaa attgaagcag gacattgctc ggcaaaagag cagcttggag
 180
 gccacccgtg agatggtgac ccgattcatg gagacagcag acagtactac agcagcagtg
 240
 ctgcagggca aactggcaga ggtgagccag cggttcgaac agctctgtct acagcagcaa
 300
 gaaaaggaga gctccctaaa gaagcttcta cccagggcag agatgtttga acacctctct
 360
 ggtaagctgc agcagttcat ggaaaacaaa agtcggatgc tggcctctgg aaatcagcca
 420
 gatcaagata ttacacattt cttccaacag atccaggagc tcaatttggg aatggaagac
 480
 caacaggaga acctagatac tcttgagcac ctggtcactg aactgagctc ttgtggcttt
 540
 gcgtggact tgtgccagca tcaggacagg gtacagaatc taagaaaaga cttcacagag
 600
 ctacagaaga cagttaaaga gagagagaaa gatgcatcat cttgccagga acagttggat
 660
 gaattccgg
 669

<210> 214

<211> 223

<212> PRT

<213> Homo sapiens

<400> 214

Ile	Ala	Gln	Ser	Gln	Ser	Val	Gln	Glu	Ser	Leu	Glu	Ser	Leu	Leu	Gln
1				5				10					15		
Ser	Ile	Gly	Glu	Val	Glu	Gln	Asn	Leu	Glu	Gly	Lys	Gln	Val	Ser	Ser
			20				25					30			
Leu	Ser	Ser	Gly	Val	Ile	Gln	Glu	Ala	Leu	Ala	Thr	Asn	Met	Lys	Leu
			35				40					45			
Lys	Gln	Asp	Ile	Ala	Arg	Gln	Lys	Ser	Ser	Leu	Glu	Ala	Thr	Arg	Glu
			50				55				60				
Met	Val	Thr	Arg	Phe	Met	Glu	Thr	Ala	Asp	Ser	Thr	Thr	Ala	Ala	Val
65				70				75						80	
Leu	Gln	Gly	Lys	Leu	Ala	Glu	Val	Ser	Gln	Arg	Phe	Glu	Gln	Leu	Cys
			85					90					95		
Leu	Gln	Gln	Gln	Glu	Lys	Glu	Ser	Ser	Leu	Lys	Lys	Leu	Leu	Pro	Gln
			100					105					110		
Ala	Glu	Met	Phe	Glu	His	Leu	Ser	Gly	Lys	Leu	Gln	Gln	Phe	Met	Glu
			115					120					125		
Asn	Lys	Ser	Arg	Met	Leu	Ala	Ser	Gly	Asn	Gln	Pro	Asp	Gln	Asp	Ile
			130					135				140			
Thr	His	Phe	Phe	Gln	Gln	Ile	Gln	Glu	Leu	Asn	Leu	Glu	Met	Glu	Asp
145				150					155					160	
Gln	Gln	Glu	Asn	Leu	Asp	Thr	Leu	Glu	His	Leu	Val	Thr	Glu	Leu	Ser
			165					170					175		
Ser	Cys	Gly	Phe	Ala	Leu	Asp	Leu	Cys	Gln	His	Gln	Asp	Arg	Val	Gln
			180					185					190		
Asn	Leu	Arg	Lys	Asp	Phe	Thr	Glu	Leu	Gln	Lys	Thr	Val	Lys	Glu	Arg

195 200 205
 Glu Lys Asp Ala Ser Ser Cys Gln Glu Gln Leu Asp Glu Phe Arg
 210 215 220

<210> 215
 <211> 814
 <212> DNA
 <213> Homo sapiens

<400> 215
 aaatttcgta cccgctccgg cacagtacga gcccttgacg atgtgagcct ggctattaag
 60
 agaggttcca tctcagccgt tatcggggcac tccggagccg gcaaateccac cctgggttcgc
 120
 ctcatcaacg gattagagac tcccacgcgt ggccgcgtct tggtagacgg caccgacgtc
 180
 tcgcagctct cggacaaagc gatgcgcccc ctacgcgcag acatcgggat gatcttccaa
 240
 cagttcaacc tattcgggtc aaggaccatc tacgacaacg ttgcctatcc actcaagctg
 300
 gtcattgga agaaagcaga cgagaagaag cgcgtcaccg aattgctgag cttcgtcggg
 360
 ttgacgagca aagcctggga ccatccagac cagctctcgg gcggacagaa acagcgggtt
 420
 ggtattgccc gagcgctagc aactaaacca tcgattttgt tggctgacga gtccacctcg
 480
 gcgctggatc cagaaacgac agctgatgtc ctatccctgc tcaagcgggt caatgcggaa
 540
 ctaggggtga cggtcgtcgt catcaccac gagatggagg tcgtccgctc gattgcccag
 600
 caggctcctg tactagcagc tggccatctc gtcaggtctg gaagcgcccg ccaggctctc
 660
 gctcatccac agtcagagac caccagcgt ttctggcgga cgattatcgg ccagcacccg
 720
 agtggggagg aacaggcacg gttgcagtcg gaaaaccag atgcacgact cgtcgacgtc
 780
 agttcgggtg ccagtcactc gttcgggtgac gcgt
 814

<210> 216
 <211> 271
 <212> PRT
 <213> Homo sapiens

<400> 216
 Lys Phe Arg Thr Arg Ser Gly Thr Val Arg Ala Leu Asp Asp Val Ser
 1 5 10 15
 Leu Ala Ile Lys Arg Gly Ser Ile Ser Ala Val Ile Gly His Ser Gly
 20 25 30
 Ala Gly Lys Ser Thr Leu Val Arg Leu Ile Asn Gly Leu Glu Thr Pro
 35 40 45
 Thr Arg Gly Arg Val Leu Val Asp Gly Thr Asp Val Ser Gln Leu Ser
 50 55 60
 Asp Lys Ala Met Arg Pro Leu Arg Ala Asp Ile Gly Met Ile Phe Gln

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65          70          75          80
Gln Phe Asn Leu Phe Gly Ser Arg Thr Ile Tyr Asp Asn Val Ala Tyr
          85          90          95
Pro Leu Lys Leu Ala His Trp Lys Lys Ala Asp Glu Lys Lys Arg Val
          100          105          110
Thr Glu Leu Leu Ser Phe Val Gly Leu Thr Ser Lys Ala Trp Asp His
          115          120          125
Pro Asp Gln Leu Ser Gly Gly Gln Lys Gln Arg Val Gly Ile Ala Arg
          130          135          140
Ala Leu Ala Thr Lys Pro Ser Ile Leu Leu Ala Asp Glu Ser Thr Ser
145          150          155          160
Ala Leu Asp Pro Glu Thr Thr Ala Asp Val Leu Ser Leu Leu Lys Arg
          165          170          175
Val Asn Ala Glu Leu Gly Val Thr Val Val Val Ile Thr His Glu Met
          180          185          190
Glu Val Val Arg Ser Ile Ala Gln Gln Val Ser Val Leu Ala Ala Gly
          195          200          205
His Leu Val Glu Ser Gly Ser Ala Arg Gln Val Phe Ala His Pro Gln
          210          215          220
Ser Glu Thr Thr Gln Arg Phe Leu Ala Thr Ile Ile Gly Gln His Pro
225          230          235          240
Ser Gly Glu Glu Gln Ala Arg Leu Gln Ser Glu Asn Pro Asp Ala Arg
          245          250          255
Leu Val Asp Val Ser Ser Val Ala Ser His Ser Phe Gly Asp Ala
          260          265          270

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<210> 217
 <211> 500
 <212> DNA
 <213> Homo sapiens

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<400> 217
nnacgcgtcg cgatgaaaga ggcgctgaaa ggtgccatcc agattccaac agtgactttt
60
agctctgaga agtccaatac tacagccctg gctgagttcg gaaaatacat tcataaagtc
120
tttctacag tggtcagcac cagctttatc cagcatgaag tcgtggaaga gtatagccac
180
ctgttcacta tccaaggctc ggaccccagc ttgcagccct acctgctgat ggctcacttt
240
gatgtggtgc ctgcccctga agaaggctgg gaggtgcccc cattctctgg gttggagcgt
300
gatggcgtca tctatggttg gggcacactg gacgacaaga actctgtgat ggcattactg
360
caggccttgg agctcctgct gatcaggaag tacatcccc gaagatcttt cttcattttc
420
ctgggccatg atgaggagtc atcagggaca ggggctcaga ggatctcagc cctgctacag
480
tcaaggggcy tccagctagc
500

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<210> 218
 <211> 166
 <212> PRT

<213> Homo sapiens

<400> 218

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Xaa Arg Val Ala Met Lys Glu Ala Leu Lys Gly Ala Ile Gln Ile Pro
 1           5           10           15
Thr Val Thr Phe Ser Ser Glu Lys Ser Asn Thr Thr Ala Leu Ala Glu
      20           25           30
Phe Gly Lys Tyr Ile His Lys Val Phe Pro Thr Val Val Ser Thr Ser
      35           40           45
Phe Ile Gln His Glu Val Val Glu Glu Tyr Ser His Leu Phe Thr Ile
      50           55           60
Gln Gly Ser Asp Pro Ser Leu Gln Pro Tyr Leu Leu Met Ala His Phe
65           70           75           80
Asp Val Val Pro Ala Pro Glu Glu Gly Trp Glu Val Pro Pro Phe Ser
      85           90           95
Gly Leu Glu Arg Asp Gly Val Ile Tyr Gly Trp Gly Thr Leu Asp Asp
      100           105           110
Lys Asn Ser Val Met Ala Leu Leu Gln Ala Leu Glu Leu Leu Leu Ile
      115           120           125
Arg Lys Tyr Ile Pro Arg Arg Ser Phe Phe Ile Ser Leu Gly His Asp
      130           135           140
Glu Glu Ser Ser Gly Thr Gly Ala Gln Arg Ile Ser Ala Leu Leu Gln
145           150           155           160
Ser Arg Gly Val Gln Leu
      165

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<210> 219

<211> 361

<212> DNA

<213> Homo sapiens

<400> 219

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acgcgttgaa acgggtatat tggggatgac gccgctgtgc aatatgcgca aggccataca
60
caaggctcgc acgtcccat gtccctcggt ttgcagagtt cttttgcgcc gcattatggc
120
gaagccgctc agattgcgcc tgatatcaag cgcacacagg tcaacaaccc cagccccttc
180
acttttttcg gcaccaacag ttatctgacg ggccgcgata cgctggcatt gatcgatccc
240
ggtcgcgttg acgaggccca tcacgcggcg ctgctgcgtg ccattgccgg ccggccggtc
300
agccatatct ttgtcagcca cacacaccgg gaccactcgc cagtgcgcac gggtttgaaa
360
g
361

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<210> 220

<211> 102

<212> PRT

<213> Homo sapiens

<400> 220

```

Met Ala Asp Arg Pro Ala Gly Asn Gly Thr Gln Gln Arg Arg Val Met

```

```

      1             5             10             15
Gly Leu Val Lys Arg Thr Gly Ile Asp Gln Cys Gln Arg Ile Ala Ala
      20             25             30
Asp Gln Ile Thr Val Gly Ala Glu Lys Ser Glu Gly Ala Gly Val Val
      35             40             45
Asp Arg Asp Ala Leu Asp Ile Arg Arg Asn Leu Asp Gly Phe Ala Ile
      50             55             60
Met Arg Arg Lys Arg Thr Val Glu Asn Glu Gly His Gly Ser Val Arg
      65             70             75             80
Thr Leu Cys Met Ala Leu Arg Ile Leu His Ser Gly Val Ile Pro Asn
      85             90             95
Ile Pro Val Ser Thr Arg
      100

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<210> 221

<211> 401

<212> DNA

<213> Homo sapiens

<400> 221

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agatctctgt gtcgtcggct gcaaagagga tgagcccaga tgcatatcag gggctccctc
60
ccacatccca cctgctcggg cagcccacgg cagcccccaca ctgctgcagc acacctcgct
120
gcagctctgg ttctctctca gaaatatccc tgccaccctg ctaagccttg gccaacactg
180
caccctgtcc caatgctggc ccagtgaacca cccccccagg gcataccctc ctacagagca
240
ttcccaaaaa aggctagagt agacaccagc ctgctccgta gggggcctcc accccattct
300
ccaaggcctc caccagggga cgctgggtga accagcatcc aggctggcc cacctccctg
360
ctcagagtcc atgttctgtg acaaggggtg caactgggat t
401

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<210> 222

<211> 124

<212> PRT

<213> Homo sapiens

<400> 222

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Met Asp Ser Glu Gln Gly Gly Gly Pro Gly Leu Asp Ala Gly Ser Pro
      1             5             10             15
Gly Val Pro Gly Trp Arg Pro Trp Arg Met Gly Trp Arg Pro Pro Thr
      20             25             30
Glu Gln Ala Gly Val Tyr Ser Ser Leu Phe Trp Glu Cys Ser Val Gly
      35             40             45
Gly Tyr Ala Leu Gly Val Trp Ser Leu Glu Pro His Trp Asp Arg Val
      50             55             60
Gln Cys Trp Pro Arg Leu Ser Arg Val Ala Gly Ile Phe Leu Arg Arg
      65             70             75             80
Asn Gln Ser Cys Ser Glu Val Cys Cys Ser Ser Val Gly Leu Pro Trp
      85             90             95
Ala Ala Arg Ala Gly Gly Met Trp Glu Gly Ala Pro Asp Met His Leu

```

100 105 110
 Gly Ser Ser Ser Leu Gln Pro Thr Thr Gln Arg Ser
 115 120

<210> 223
 <211> 331
 <212> DNA
 <213> Homo sapiens

<400> 223
 tcatgaaatc tgtgggcagt gacccaggag ggtatgggca ggcccaacca ggttggtgtg
 60
 cccttgaagc cccacagacc tgccagggca gcagggcagt tgggagccgg agaacctgag
 120
 aaccaagcca ggctgcatgc aggaggctgg cacgtgaacg ctgcaggtgt tgccggcagc
 180
 cgtggtgcct ggcagatagt gtctgacccc cnaggacctt cttgctgggc agcccagtc
 240
 aaaagctggt cccgcttaag ccacccccac cgccttgcc acacctggca catgggtgaa
 300
 gcaaggcat ttcccgggc ttctgttcc c
 331

<210> 224
 <211> 103
 <212> PRT
 <213> Homo sapiens

<400> 224
 Met Pro Leu Leu His Pro Cys Ala Arg Cys Gly Gln Gly Gly Gly Gly
 1 5 10 15
 Gly Leu Ser Gly Asn Ser Phe Trp Thr Gly Leu Pro Ser Lys Lys Val
 20 25 30
 Leu Gly Gly Arg Thr Leu Ser Ala Arg His His Gly Cys Arg Gln His
 35 40 45
 Leu Gln Arg Ser Arg Ala Ser Leu Leu His Ala Ala Trp Leu Gly Ser
 50 55 60
 Gln Val Leu Arg Leu Pro Thr Ala Leu Leu Pro Trp Gln Val Cys Gly
 65 70 75 80
 Ala Ser Arg Ala His Gln Pro Gly Trp Ala Cys Pro Tyr Pro Pro Gly
 85 90 95
 Ser Leu Pro Thr Asp Phe Met
 100

<210> 225
 <211> 339
 <212> DNA
 <213> Homo sapiens

<400> 225
 tgatcacggg cgtgagccac cagcccagca tcccttgct ttcattcgca cctccacctc
 60
 cagaatgacc ctcatccct cctgcacaga cggtgacagc agtaactcct acaaacacca
 120

ccagactgat cttcaagagc agaggaactc ccaatcacga ttccaccccc gccgggctct
 180
 caaatcctcc agggctgcct gctatggggg agggaggcac actttgcttg gctctcaagg
 240
 cctcagccag ccgggtccaa accaactccc agcctggcct caccatccca ccgccaaacc
 300
 tttgctcaca ctggccccctc ttcttggaac atgggcctn
 339

<210> 226
 <211> 91
 <212> PRT
 <213> Homo sapiens

<400> 226
 Met Thr Leu Ile Pro Ser Cys Thr Asp Gly Asp Ser Ser Asn Ser Tyr
 1 5 10 15
 Lys His His Gln Thr Asp Leu Gln Glu Gln Arg Asn Ser Gln Ser Arg
 20 25 30
 Phe His Pro Arg Arg Ala Leu Lys Ser Ser Arg Ala Ala Cys Tyr Gly
 35 40 45
 Gly Gly Arg His Thr Leu Leu Gly Ser Gln Gly Leu Ser Gln Pro Gly
 50 55 60
 Pro Asn Gln Leu Pro Ala Trp Pro His His Pro Thr Ala Lys Pro Leu
 65 70 75 80
 Leu Thr Leu Ala Pro Leu Pro Gly Thr Trp Ala
 85 90

<210> 227
 <211> 353
 <212> DNA
 <213> Homo sapiens

<400> 227
 gtcgaccct tcgattgtgg cgaactccat ggctgctgcg ggctgcgta ggctctcgag
 60
 tagctcgacg tcgggttcgc gagggctcgc agcgtggcca tgctgcttct tggatggttc
 120
 gggcaactcc tcgggggatt cgagcagttc ttggcgcacc tgctctggcg tcatcccga
 180
 ggccaggccg acaagtgtg cctcctgcc aacgctgagc gacgctgcca tgttgagtac
 240
 ggcgtcttca ctggtcaggg cgagcgcggt atcgaccagg ttggcgtcca ggccgagaga
 300
 cagcatgtct gctcagtcgc ggtgatgact ggagtggcgg tctcctgcac ggg
 353

<210> 228
 <211> 102
 <212> PRT
 <213> Homo sapiens

<400> 228
 Met Leu Ser Leu Gly Leu Asp Ala Asn Leu Val Asp Thr Ala Leu Ala

```

      1           5           10           15
Leu Thr Ser Glu Asp Ala Val Leu Asn Met Ala Ala Ser Leu Ser Gly
      20           25           30
Trp Gln Glu Ala Ala Leu Val Gly Leu Ala Ser Gly Met Thr Pro Glu
      35           40           45
Gln Val Arg Gln Glu Leu Leu Glu Ser Pro Glu Glu Leu Pro Glu Pro
      50           55           60
Ser Lys Lys Gln His Gly His Ala Ala Ser Pro Arg Glu Pro Asp Val
65           70           75           80
Glu Leu Leu Glu Ser Leu Arg Arg Pro Ala Ala Met Glu Phe Ala
      85           90           95
Thr Ile Glu Gly Val Asp
      100

```

<210> 229

<211> 743

<212> DNA

<213> Homo sapiens

<400> 229

```

nnggctaggg acacggcctc ctctcaaca ggcagtgcct gtgcaggctc aggggcatca
60
tcaaagataa cacagggtg gtcaggggct gctggctgct cctgccccag gactggctcc
120
aggatgggca aggctgcctc cctggtagcc agggggagag gggaaggagg caccaggagg
180
tgggccagca ggtgtggcat cggccaggag gagatggagg ccagcagcag ccaagaccag
240
agtaaagtgt ctgccccagg ggtgctcaca gcccaggacc gggtagttgg aaagccagcc
300
cagcttggca ctcagcggag ccaggaggca gatgttcagg actgggagtt cagaaagagg
360
gattcccagg gcacttactc cagccgggat gcagaactcc aggaccagga attcggaaag
420
agagattcac tgggtacctc cagtagtcga gatgtaagcc ttggggactg ggaatttggg
480
aagagagatt ctctgggtgc ttatgccagc caagatgcca acgagcaggg ccaagatttg
540
gggaagaggg accaccatgg taggtacagc agccaggatg ccgatgagca ggactgggag
600
tttcagaaga gagatgtgtc actcggcacc tatggcagcc gggctgcgga gccacaggaa
660
caggagtttg ggaagagcgc ttggataagg gactacagca gtggtggcag ctccaggacc
720
cttgacgccc aggacagaag ctt
743

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<210> 230

<211> 247

<212> PRT

<213> Homo sapiens

<400> 230

```

Xaa Ala Arg Asp Thr Ala Ser Ser Ser Thr Gly Ser Ala Cys Ala Gly

```

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      1           5           10           15
Ser Gly Ala Ser Ser Lys Ile Thr Gln Gly Trp Ser Gly Ala Ala Gly
      20           25           30
Cys Ser Cys Pro Arg Thr Gly Ser Arg Met Gly Lys Ala Ala Ser Leu
      35           40           45
Val Ala Arg Gly Arg Gly Glu Gly Ser Thr Arg Glu Trp Ala Ser Arg
      50           55           60
Cys Gly Ile Gly Gln Glu Glu Met Glu Ala Ser Ser Ser Gln Asp Gln
      65           70           75           80
Ser Lys Val Ser Ala Pro Gly Val Leu Thr Ala Gln Asp Arg Val Val
      85           90           95
Gly Lys Pro Ala Gln Leu Gly Thr Gln Arg Ser Gln Glu Ala Asp Val
      100          105          110
Gln Asp Trp Glu Phe Arg Lys Arg Asp Ser Gln Gly Thr Tyr Ser Ser
      115          120          125
Arg Asp Ala Glu Leu Gln Asp Gln Glu Phe Gly Lys Arg Asp Ser Leu
      130          135          140
Gly Thr Tyr Ser Ser Arg Asp Val Ser Leu Gly Asp Trp Glu Phe Gly
      145          150          155          160
Lys Arg Asp Ser Leu Gly Ala Tyr Ala Ser Gln Asp Ala Asn Glu Gln
      165          170          175
Gly Gln Asp Leu Gly Lys Arg Asp His His Gly Arg Tyr Ser Ser Gln
      180          185          190
Asp Ala Asp Glu Gln Asp Trp Glu Phe Gln Lys Arg Asp Val Ser Leu
      195          200          205
Gly Thr Tyr Gly Ser Arg Ala Ala Glu Pro Gln Glu Gln Glu Phe Gly
      210          215          220
Lys Ser Ala Trp Ile Arg Asp Tyr Ser Ser Gly Gly Ser Ser Arg Thr
      225          230          235          240
Leu Asp Ala Gln Asp Arg Ser
      245

```

<210> 231
 <211> 431
 <212> DNA
 <213> Homo sapiens

<400> 231
 acgcgttgcc caccgagagg ctggcgaggg tgtgcagcac ggcgagtggt ggcaggggtcc
 60
 cagggtgcag cctgcgcagc agctcctcca tcaccttgct gatgaactgt ctccccacgg
 120
 ccaccaggac gccactcgcc gcctgctgcc agtcccagac caggtccttc gtcttggtca
 180
 tctcgctgga ggccaggagg atgatggtgc tggctgtgtc cttgtccagc tactggcgcc
 240
 gactgctcag gacctctccc atggccctca ggaccgctgc tcggtatggg tgtgccagct
 300
 tgtcatgctg ccgcagatac tctcgcagg caccgagcgt ctccaccctg ctggacgcca
 360
 tcaccgataa ggacccctg gtgcaggagc aggtctgcag tgccctgtgc tccctcgggg
 420
 aggtgcggcc g
 431

<210> 232
 <211> 120
 <212> PRT
 <213> Homo sapiens

<400> 232
 Met Ala Ser Ser Arg Val Glu Thr Leu Arg Ala Cys Glu Glu Tyr Leu
 1 5 10 15
 Arg Gln His Asp Lys Leu Ala His Pro Tyr Arg Ala Ala Val Leu Arg
 20 25 30
 Ala Met Glu Arg Val Leu Ser Ser Arg Ala Ser Glu Leu Asp Lys Asp
 35 40 45
 Thr Ala Ser Thr Ile Ile Leu Leu Ala Ser Ser Glu Met Thr Lys Thr
 50 55 60
 Lys Asp Leu Val Trp Asp Trp Gln Gln Ala Ala Ser Gly Val Leu Val
 65 70 75 80
 Ala Val Gly Arg Gln Phe Ile Ser Lys Val Met Glu Glu Leu Leu Arg
 85 90 95
 Arg Leu His Pro Gly Thr Leu Pro His Cys Ala Val Leu His Thr Leu
 100 105 110
 Ala Ser Leu Ser Val Ala Asn Ala
 115 120

<210> 233
 <211> 606
 <212> DNA
 <213> Homo sapiens

<400> 233
 acgcgttcag ggatgccaga aatctaactg ggtaataaaa agctgggaga acattccaga
 60
 aagggtgggca cccttagcat tcccaaaaag caccagccct cctcatcctt cccagcttct
 120
 gtgctggaat gcacccccat cggaagggt cgaaaactca ggacacatta ggatcacctg
 180
 gaaagcattt gtcaaaacgc atctccctgc gggtcagggt ccaagttaaa atcaaaacttc
 240
 aggtgatgct gactcagggt gctccagaaa cacctgggga agcagcactt tggaggctgc
 300
 ctctcacatc caccacacag caagtgggca gggagctagg taaatctcct tccagttga
 360
 gaaggggctc ggagcaggca cagagaagag atacccttag aatgcaagtt gttagctgc
 420
 gaaagtccag cctgcagggt tcctgggcaa gctagtgggc tgaagtatgc cacagcaaca
 480
 ggcttctaga gccggctgcc cagctectac tctgcctctg ccactcactg actgtgtggt
 540
 cttgagcagg tcacctgtct gacttggtga gagctgacag gcatcacctg ttagaggctt
 600
 acgcgt
 606

<210> 234

<211> 108
 <212> PRT
 <213> Homo sapiens

<400> 234
 Met His Pro His Arg Lys Gly Ser Lys Thr Gln Asp Thr Leu Gly Ser
 1 5 10 15
 Pro Gly Lys His Leu Ser Lys Arg Ile Ser Leu Arg Val Arg Val Gln
 20 25 30
 Val Lys Ile Lys Leu Gln Val Met Leu Thr Gln Val Ala Pro Glu Thr
 35 40 45
 Pro Gly Glu Ala Ala Leu Trp Arg Leu Pro Leu Thr Ser Thr Pro Gln
 50 55 60
 Gln Val Gly Arg Glu Leu Gly Lys Ser Pro Ser Gln Leu Arg Arg Gly
 65 70 75 80
 Ser Glu Gln Ala Gln Arg Arg Asp Thr Leu Arg Met Gln Val Val Gln
 85 90 95
 Leu Arg Lys Ser Ser Leu Gln Ala Ser Trp Ala Ser
 100 105

<210> 235
 <211> 328
 <212> DNA
 <213> Homo sapiens

<400> 235
 cgaccgttga ctattctcta caaaccacaa agacaatgat tgatttaact gaatttagaa
 60
 atagcaaaca cttaaaacag cagcagtaca gagctgaaaa ccagattctt ttgaaagaga
 120
 ttgaaagtct agaggaagaa cgacttgatc tgaaaaaaaa aattcgccaa atgggtcaag
 180
 aaagaggaaa aagaagggca acttcaggat taaccactgg ggacctgaac ctaactgaaa
 240
 acattttctca aggagataga ataagtgaag gaaaattgga tttattgagc ctcaaaaata
 300
 tgagtgaagc acaatcaaag aatgaatt
 328

<210> 236
 <211> 97
 <212> PRT
 <213> Homo sapiens

<400> 236
 Met Ile Asp Leu Thr Glu Phe Arg Asn Ser Lys His Leu Lys Gln Gln
 1 5 10 15
 Gln Tyr Arg Ala Glu Asn Gln Ile Leu Leu Lys Glu Ile Glu Ser Leu
 20 25 30
 Glu Glu Glu Arg Leu Asp Leu Lys Lys Lys Ile Arg Gln Met Ala Gln
 35 40 45
 Glu Arg Gly Lys Arg Arg Ala Thr Ser Gly Leu Thr Thr Gly Asp Leu
 50 55 60
 Asn Leu Thr Glu Asn Ile Ser Gln Gly Asp Arg Ile Ser Glu Arg Lys

65		70		75		80									
Leu	Asp	Leu	Leu	Ser	Leu	Lys	Asn	Met	Ser	Glu	Ala	Gln	Ser	Lys	Asn
		85						90						95	
Glu															

<210> 237

<211> 2059

<212> DNA

<213> Homo sapiens

<400> 237

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ggccataagg gcacgacgca ttcctagccg atgcaccaac acgggcatga agcctgccga
60
gagcacgaag ccggcggtcca tagctacggc ccatacggtc atgtctgcca tggctccgtt
120
gatgtcagac tgcacatgaa atcgggttacg gtaccccagg atcatcgcta ccgagtacac
180
cccgaacagc acccgctggg cgccgatcag cgtgagggag tgccccacca gtggcacttt
240
tcttagatag cggaacccat ccaccacatc ccagtcacc gttctcatcg tccgggaacg
300
atccaccagt ggcgggccaa gctcccgacg tgaaaactgc agcccctagg cgaccgagac
360
tgcaagagg gctgcggaaga tgcagaaaat gatcgtgtcg gcgtggtgca caggaatatg
420
gcgtccggca atcatgcgca ctgctgcagc aacaaccgca ccgatcatga gccctagcgg
480
ccaatcggtg gcatgattga cgatgccgtc aggtagtcgc gcttgctgat ggtgtattcc
540
aaccagcga ccaaggcggt gagcaaaaac cggttcaggc tcatcgcgat gagcaaccca
600
atgagcaagg ccagggtgga gggcttatcg cgcgaccac ccagaccaa gatccccagc
660
ccgaccagg tgacggcacg cattcatctg cgtattgtcc cgactacacc gtgaggggcg
720
tctctgatct gcagctcatc aagggttacg gactgcagta cctcaatgca ctccctggta
780
cccagacca gaacctgcca cagtccctg agaacaccga cctgcagggtt attccaggca
840
gccagaccag gtccttggt gagaagacca ccacagcggc agctttcca gtagcccttt
900
ccctctttgg cacagttgga acctccagtt gataaatgac tgtggactag cgcgcgttt
960
ttgttttcag agcacacgta aggggtccagc cacagcaggc ccggcgctccc ggtggaaggc
1020
agccctgggc ggaaccagg cgtttaacgg ctactaggc agccccagat ctggggaagc
1080
agatgagcac gtggggagct ggagtgaact gagcagaagt tttgtgccc cctgccccca
1140
tcccctccag gccacgtttt agatggccct tgtagttgag ggtcctgggt gtcctcagaa
1200
ctagacatca atgcctggat ccttcagcgg gccctgccct cctttaggag acaggagtca
1260

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ccagggcaca gccctccagg cccgcctcag gaaggaatga aaggaatgcc atcatctcta
 1320
 gttcccaggg cccagccttc cctttctccc ccggggcagg gacagtgcgg catattcaga
 1380
 ttcagacctc tttgggctga gccaccttgt gagtgcagtt actgcctttg tgtggccgtg
 1440
 acctctatatt gtttgctttt aatttgccaa cctatcgctg ctggcagcac tttttgagca
 1500
 agccgagagc acccattttg gctggggatt cagatcgatg gccttgtoea tgttgctcctt
 1560
 tctggcttcc ctgatggtgt catgtttcag cgcattgcgc ccagcctttc ccatgtgcca
 1620
 aaccagaagc tccactgccc gtaggtgtc cctgtagccc tgctccctcc ctggaggctg
 1680
 ctcttctgat tctgagagct ggcctagtgg tctgaggggc cctttctgc ttctctgccc
 1740
 acctgtgtgag ttgccactcg cagtgttgtc agttcccgtg ttctgagaag aggtcatgcc
 1800
 tgggaggaag ggatcgatc gctgcatcga atcctctctc cgccgtgtgg cccccaggag
 1860
 agtagctgcc tgttgacact gctccacacc tccccacagc ctccctgcag gtgctgtgtg
 1920
 gccgtgatgt gcagagagca gtgaggagg gttcatgaac caggtggatc ctctttaaaa
 1980
 aaaaaaaaag tttttgttat atctctaaaa tcccatagct aggaacagaa aaaaaggaaa
 2040
 agacttgaaa tgttctaga
 2059

<210> 238

<211> 129

<212> PRT

<213> Homo sapiens

<400> 238

Ala	Glu	Gln	Lys	Phe	Cys	Ala	Arg	Leu	Pro	Pro	Ser	Pro	Pro	Gly	His
1				5				10						15	
Val	Leu	Asp	Gly	Pro	Cys	Ser	Cys	Gly	Ser	Trp	Val	Ser	Ser	Glu	Leu
		20						25						30	
Asp	Ile	Asn	Ala	Trp	Ile	Leu	Gln	Pro	Ala	Leu	Pro	Ser	Phe	Arg	Arg
		35					40					45			
Gln	Glu	Ser	Pro	Gly	His	Ser	Pro	Pro	Gly	Pro	Pro	Gln	Glu	Gly	Met
		50				55						60			
Lys	Gly	Met	Pro	Ser	Ser	Leu	Val	Pro	Arg	Ala	Gln	Pro	Ser	Pro	Ser
65					70				75					80	
Pro	Pro	Gly	Gln	Gly	Gln	Cys	Gly	Ile	Phe	Arg	Phe	Arg	Pro	Leu	Trp
				85				90						95	
Ala	Glu	Pro	Pro	Cys	Glu	Cys	Ser	Tyr	Cys	Leu	Cys	Val	Ala	Val	Thr
			100					105					110		
Ser	Ile	Cys	Leu	Leu	Leu	Ile	Cys	Gln	Pro	Ile	Ala	Ala	Gly	Ser	Thr
			115				120						125		
Phe															

<210> 239
 <211> 388
 <212> DNA
 <213> Homo sapiens

<400> 239
 ntctagatca ctctgtagcg catgggtaaa tgctgacaca atagaaaagt gcgaggacat
 60
 cctcgaatta atgagatggt ggactggatg agtcaagttc tcgtcgttgc ggaggctgtc
 120
 ggtcagctgc cctcctcca cttctgcttc tcggcggtac cccataccgt attggccgcg
 180
 tgttcacctt tgaatgcagc catgtcgtcg tctccgtatc gaaatgatgt gccatcgaag
 240
 atgccgacct cagcatcggc atctgcagtg atgagtgcgt atcgcgccac acgaaacgcc
 300
 cagcgcaacc gtgtcctcgc acgatacgaa gtgcttgggt atctcagctc tggtagctat
 360
 ggtcgtgtat ataaagcaaa ggaacttn
 388

<210> 240
 <211> 104
 <212> PRT
 <213> Homo sapiens

<400> 240
 Met Val Asp Trp Met Ser Gln Val Leu Val Val Ala Ala Ala Val Gly
 1 5 10 15
 Gln Leu Pro Leu Leu His Phe Cys Phe Ser Ala Leu Pro His Thr Val
 20 25 30
 Leu Ala Ala Cys Ser Pro Leu Asn Ala Ala Met Ser Ser Pro Tyr
 35 40 45
 Arg Asn Asp Val Pro Ser Lys Met Pro Thr Ser Ala Ser Ala Ser Ala
 50 55 60
 Val Met Ser Ala Tyr Arg Ala Thr Arg Asn Ala Gln Arg Asn Arg Val
 65 70 75 80
 Leu Ala Arg Tyr Glu Val Leu Gly Tyr Leu Ser Ser Gly Thr Tyr Gly
 85 90 95
 Arg Val Tyr Lys Ala Lys Glu Leu
 100

<210> 241
 <211> 330
 <212> DNA
 <213> Homo sapiens

<400> 241
 ncggggggcc gagttgaaag ctgccggcac actggctgtg ctgcttgctt cacttctcgg
 60
 gatgctgctt ccagggcggg cctgggggaa acatcggcct tcccaggcac ccttagcccc
 120
 tcccatctgg gggcccttag cacagtcctt gggacccac atgctgcctt tcaggctgat
 180

gtgggcaaac tcggcagccc agcctactcc cgggccatgg gccaccatct cagcttcct
 240
 ggggctaagc cgtgtgctct gaatcaaaag cagtagtggc atcggcggca ctggcgccat
 300
 gggaaacggg ttgacttgca caaccagcac
 330

<210> 242
 <211> 100
 <212> PRT
 <213> Homo sapiens

<400> 242
 Met Ala Pro Val Pro Pro Met Pro Leu Leu Leu Ile Gln Ser Thr
 1 5 10 15
 Arg Leu Ser Pro Arg Glu Ala Glu Met Val Ala His Gly Pro Gly Val
 20 25 30
 Gly Trp Ala Ala Glu Phe Ala His Ile Ser Leu Lys Gly Ser Met Trp
 35 40 45
 Gly Pro Arg Asp Cys Ala Lys Gly Pro Gln Met Gly Arg Ala Lys Gly
 50 55 60
 Ala Trp Glu Gly Arg Cys Phe Pro Gln Ala Arg Pro Gly Ser Ser Ile
 65 70 75 80
 Pro Arg Ser Glu Ala Ser Ser Thr Ala Ser Val Pro Ala Ala Phe Asn
 85 90 95
 Ser Ala Pro Arg
 100

<210> 243
 <211> 330
 <212> DNA
 <213> Homo sapiens

<400> 243
 nnaccttctc tccgcgttat taccaaagat gctatgcacg taactgcgga ggaaattctt
 60
 cacacaggcc acccgcgcc cactgcgctc gtcgctaate ttccctataa cgttgcggtg
 120
 cccgtactgc tacacatgct agatattctc cctccttgc ggactacagt ggtgatggtg
 180
 caggcagaag tagccgatcg attggctgcc acaccaggca gccgcattta cgggtgtcccc
 240
 agcgtcaaag tcaactttta cgggactgtc tcgctgctgg gagcaattgg acgcaatgtc
 300
 ttctggccgg ctcccaatgt tgattctggn
 330

<210> 244
 <211> 110
 <212> PRT
 <213> Homo sapiens

<400> 244
 Xaa Pro Ser Leu Arg Val Ile Thr Lys Asp Ala Met His Val Thr Ala

```

1           5           10           15
Glu Glu Ile Leu His Thr Gly His Pro Ala Pro Thr Ala Leu Val Ala
           20           25           30
Asn Leu Pro Tyr Asn Val Ala Val Pro Val Leu Leu His Met Leu Asp
           35           40           45
Ile Leu Pro Ser Leu Arg Thr Thr Val Val Met Val Gln Ala Glu Val
           50           55           60
Ala Asp Arg Leu Ala Ala Thr Pro Gly Ser Arg Ile Tyr Gly Val Pro
65           70           75           80
Ser Val Lys Val Asn Phe Tyr Gly Thr Val Ser Arg Ala Gly Ala Ile
           85           90           95
Gly Arg Asn Val Phe Trp Pro Ala Pro Asn Val Asp Ser Gly
           100           105           110

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<210> 245
 <211> 355
 <212> DNA
 <213> Homo sapiens

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<400> 245
tctagatcct gaatcaccca cctcctagtt tcggattcac ctccgccggc gtcacctgaa
60
aacaatgtcg agcccgaatg gatgatggta gccacacca tctcggaaaag gtggaatgca
120
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<210> 246
 <211> 101
 <212> PRT
 <213> Homo sapiens

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<400> 246
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           20           25           30
Gly Lys Ile Phe Val Val Asn Ser Arg Trp Met Pro Arg Asp Ala Ser
           35           40           45
Ile Arg Ser Glu Cys Arg Leu Pro Pro Thr Val Asn Phe Cys Phe Cys
           50           55           60
Asn Thr Leu His Ser Thr Phe Pro Arg Trp Val Trp Leu Pro Ser Ser
65           70           75           80
Ile Arg Ala Arg His Cys Phe Gln Val Thr Pro Ala Glu Val Asn Pro
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Lys Leu Gly Gly Gly
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<210> 247
 <211> 333
 <212> DNA
 <213> Homo sapiens

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<210> 248
 <211> 111
 <212> PRT
 <213> Homo sapiens

<400> 248
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 35 40 45
 Val Asp Arg Val Phe Val Asp His Pro Leu Phe Leu Glu Arg Val Trp
 50 55 60
 Gly Lys Thr Glu Glu Lys Ile Tyr Gly Pro Asp Ala Gly Thr Asp Tyr
 65 70 75 80
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<210> 249
 <211> 5503
 <212> DNA
 <213> Homo sapiens

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<210> 250

<211> 927

<212> PRT

<213> Homo sapiens

<400> 250

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		20						25					30		
Phe	Val	Gln	Arg	Asn	Pro	Gly	Gly	Ser	Pro	Arg	Thr	Ala	Cys	His	Leu
		35					40					45			
Asn	Pro	Ser	Pro	Asp	Gly	Glu	Ala	Tyr	Thr	Leu	Ala	Ser	Arg	Pro	Pro
	50				55					60					
Val	Arg	Leu	Asn	Asp	Val	Met	Leu	Arg	Leu	Val	Thr	Glu	Leu	Arg	Trp
65				70					75					80	
Gln	Lys	Phe	Val	Met	Phe	Tyr	Asp	Ser	Glu	Tyr	Asp	Ile	Arg	Gly	Leu
			85					90					95		
Gln	Ser	Phe	Leu	Asp	Gln	Ala	Ser	Arg	Leu	Gly	Leu	Asp	Val	Ser	Leu
		100					105					110			
Gln	Lys	Val	Asp	Lys	Asn	Ile	Ser	His	Val	Phe	Thr	Ser	Leu	Phe	Thr
		115				120						125			
Thr	Met	Lys	Thr	Glu	Glu	Leu	Asn	Arg	Tyr	Arg	Asp	Thr	Leu	Arg	Arg
	130					135					140				
Ala	Ile	Leu	Leu	Leu	Ser	Pro	Gln	Gly	Ala	His	Ser	Phe	Ile	Asn	Glu
145				150					155					160	
Ala	Val	Glu	Thr	Asn	Leu	Ala	Ser	Lys	Asp	Ser	His	Trp	Val	Phe	Val
		165					170						175		
Asn	Glu	Glu	Ile	Ser	Asp	Pro	Glu	Ile	Leu	Asp	Leu	Val	His	Ser	Ala
		180					185					190			
Leu	Gly	Arg	Met	Thr	Val	Val	Arg	Gln	Ile	Phe	Pro	Ser	Ala	Lys	Asp
		195				200						205			
Asn	Gln	Lys	Cys	Thr	Arg	Asn	Asn	His	Arg	Ile	Ser	Ser	Leu	Leu	Cys
	210					215					220				
Asp	Pro	Gln	Glu	Gly	Tyr	Leu	Gln	Met	Leu	Gln	Ile	Ser	Asn	Leu	Tyr
225			230						235					240	
Leu	Tyr	Asp	Ser	Val	Leu	Met	Leu	Ala	Asn	Ala	Phe	His	Arg	Lys	Leu
			245					250						255	
Glu	Asp	Arg	Lys	Trp	His	Ser	Met	Ala	Ser	Leu	Asn	Cys	Ile	Arg	Lys

563

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        690              695              700
Arg Ile Leu Glu Leu Gln Asp Thr Gly Asp Leu Asp Val Leu Lys Gln
705              710              715              720
Lys Trp Trp Pro His Met Gly Arg Cys Asp Leu Thr Ser His Ala Ser
              725              730              735
Ala Gln Ala Asp Gly Lys Ser Leu Lys Leu His Ser Phe Ala Gly Val
              740              745              750
Phe Cys Ile Leu Ala Ile Gly Leu Leu Ala Cys Leu Val Ala Ala
              755              760              765
Leu Glu Leu Trp Trp Asn Ser Asn Arg Cys His Gln Glu Thr Pro Lys
              770              775              780
Glu Asp Lys Glu Val Asn Leu Glu Gln Val His Arg Arg Met Asn Ser
785              790              795              800
Leu Met Asp Glu Asp Ile Ala His Lys Gln Ile Ser Pro Ala Ser Ile
              805              810              815
Glu Leu Ser Ala Leu Glu Met Gly Gly Leu Ala Pro Thr Gln Thr Leu
              820              825              830
Glu Pro Thr Arg Glu Tyr Gln Asn Thr Gln Leu Ser Val Ser Thr Phe
              835              840              845
Leu Pro Glu Gln Ser Ser His Gly Thr Ser Arg Thr Leu Ser Ser Gly
              850              855              860
Pro Ser Ser Asn Leu Pro Leu Pro Leu Ser Ser Ser Ala Thr Met Pro
865              870              875              880
Ser Met Gln Cys Lys His Arg Ser Pro Asn Gly Gly Leu Phe Arg Gln
              885              890              895
Ser Pro Val Lys Thr Pro Ile Pro Met Ser Phe Gln Pro Val Pro Gly
              900              905              910
Gly Val Leu Pro Glu Ala Leu Asp Thr Ser His Gly Thr Ser Ile
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<210> 251

<211> 291

<212> DNA

<213> Homo sapiens

<400> 251

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gacgtcaacg cgctcgaacg gctgcggttg gccgtgcgcg ccagcgtggt catcctcatc

120

gagtaccacc attcggtagac cctgctgctg cggtggcgcg ggaactcacc tctggaacga

180

gaggccctcg aggcccgccg ccgtatcgat gcgaagggttc ccgtctcgt cgagagcgcc

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291

<210> 252

<211> 97

<212> PRT

<213> Homo sapiens

<400> 252

Xaa Ile Ser Arg Gly Val Arg Ala Leu Asp Ser Ala Val Glu Thr Glu

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      1           5           10           15
Ser Leu Arg Glu Asp Val Asn Ala Leu Glu Arg Leu Arg Leu Ala Val
      20           25           30
Arg Ala Ser Val Val Ile Leu Ile Glu Tyr His His Ser Val Thr Leu
      35           40           45
Leu Leu Arg Val Arg Gly Asn Ser Pro Leu Glu Arg Glu Ala Leu Glu
      50           55           60
Ala Arg Arg Arg Ile Asp Ala Lys Val Pro Ala Leu Val Glu Ser Ala
      65           70           75           80
Ile Ala Glu Gly Gly Leu Arg Ser Asp Phe Thr Pro Gly Leu Ile Thr
      85           90           95
Arg

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<210> 253

<211> 327

<212> DNA

<213> Homo sapiens

<400> 253

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180
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gtcactcgt cgcggtgtcc tccgcggtct ccataccgt ccctgcgaca tggaacgcc
300
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327

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<210> 254

<211> 106

<212> PRT

<213> Homo sapiens

<400> 254

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Met Gly Ala Leu Ala Arg Val Leu Val Pro Ser Gln Pro Gly Glu Arg
      1           5           10           15
Arg Ala Leu Thr Val Leu Tyr Arg Pro Ile Ser Gln Pro Ser Ala Asp
      20           25           30
Arg Ser Thr Asn Arg Ala His Met Ser Ala Val Met Ala Gly Thr Leu
      35           40           45
Arg Glu Lys Ala Gly Lys Val Glu Arg Ala Asn Asp Arg Arg Thr Val
      50           55           60
Gly Thr Leu His Glu Arg Asp Glu Lys Leu Ala Ala Gly Arg Ser Leu
      65           70           75           80
Val Ala Val Ser Ser Ala Val Ser Ile Thr Val Pro Ala Thr Trp Asn
      85           90           95
Ala His Asp Phe Gly Arg Arg Leu Asp Ala
      100           105

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<210> 255
 <211> 372
 <212> DNA
 <213> Homo sapiens

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 180
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 372

<210> 256
 <211> 124
 <212> PRT
 <213> Homo sapiens

<400> 256
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 Ala His Glu Ile Val Asp His Arg Pro Asp Leu Ile Leu Cys Asp
 20 25 30
 Trp Met Met Pro Gly Gly Ser Gly Ile Glu Leu Thr Arg Arg Leu Lys
 35 40 45
 Lys Asp Ser Thr Thr Ala Glu Ile Pro Val Ile Leu Leu Thr Ala Lys
 50 55 60
 Ser Glu Glu Asp Asn Lys Ile Gln Gly Leu Glu Val Gly Ala Asp Asp
 65 70 75 80
 Tyr Ile Thr Lys Pro Phe Ser Pro Arg Glu Leu Val Ala Arg Leu Lys
 85 90 95
 Ala Val Leu Arg Arg Ala Thr Pro Gln Gly Ile Asp Asp Pro Ile Glu
 100 105 110
 Ile Asp Gly Leu Thr Leu Asp Pro Ile Ser Gln Arg
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<210> 257
 <211> 639
 <212> DNA
 <213> Homo sapiens

<400> 257
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<210> 258

<211> 213

<212> PRT

<213> Homo sapiens

<400> 258

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			20					25					30		
Met	Cys	Ala	Gln	Val	Leu	Ala	Glu	Arg	Phe	Gly	Leu	Gly	Gly	Ile	Phe
		35					40					45			
Phe	Gly	Leu	Pro	Thr	Met	Ala	Thr	Ser	Asn	Pro	Met	Phe	Gly	Arg	Val
	50					55					60				
Arg	Glu	Trp	Leu	Asp	Ala	Val	Pro	Ala	Lys	Asp	Pro	Ser	Ser	Ile	Ser
65				70					75					80	
Leu	Ala	His	Ser	Lys	Ala	Gly	Leu	Asn	Glu	Glu	Tyr	Gln	Gln	Leu	Met
			85					90						95	
Pro	Trp	Asn	Ala	Thr	Met	Ala	Val	Tyr	Asp	Glu	Gly	Ala	Gly	Thr	Gln
		100						105					110		
Arg	Glu	Ala	Ser	Ala	Ile	Val	His	Glu	Trp	Phe	Leu	Gly	Arg	Lys	Arg
		115				120						125			
Ala	Ile	Leu	Ala	Asp	His	Val	Val	Gly	Thr	Ile	Asp	Gln	Ala	Leu	Phe
	130					135					140				
Thr	Gly	Leu	Lys	Ala	Lys	His	Val	Val	Leu	Arg	His	Leu	Gly	Leu	Ala
145				150					155					160	
Ser	Lys	Val	Val	Ile	Ile	Asp	Glu	Val	His	Ala	Ala	Asp	Val	Tyr	Met
			165					170						175	
Arg	Glu	Tyr	Leu	Lys	Val	Val	Leu	Glu	Trp	Leu	Gly	Ala	Tyr	Arg	Thr
		180					185					190			
Pro	Val	Ile	Leu	Met	Ser	Ala	Thr	Leu	Pro	Pro	Ala	Gln	Arg	His	Glu
		195					200					205			
Leu	Ala	Leu	Ala	Tyr											
		210													

<210> 259
 <211> 252
 <212> DNA
 <213> Homo sapiens

<400> 259
 acgcgtgcac tgtgtgtatg catggtaacg tacacgtgtg cactgtgtgt ggtgtgcatg
 60
 ncatgggtgtg tgcacgtgtg cnaactgtgta tgcattggtaa tgtgcacgtg tgcantctgtg
 120
 tgtnggtgtg tatgcatgng tgtgtgcacg tgtgcactgn agtgtgggggt gtatgcatgg
 180
 tgtgtgcaca tgagcactgt gtggtgtgta tgcattggtn ggtgcacgtg tgcactgtgt
 240
 atgcaatggt gt
 252

<210> 260
 <211> 84
 <212> PRT
 <213> Homo sapiens

<400> 260
 Thr Arg Ala Leu Cys Val Cys Met Val Thr Tyr Thr Cys Ala Leu Cys
 1 5 10 15
 Val Val Cys Met Xaa Trp Cys Val His Val Cys Xaa Cys Val Cys Met
 20 25 30
 Val Met Cys Thr Cys Ala Xaa Val Cys Xaa Cys Val Cys Met Xaa Val
 35 40 45
 Cys Thr Cys Ala Leu Xaa Cys Gly Val Tyr Ala Trp Cys Val His Met
 50 55 60
 Ser Thr Val Trp Cys Val Cys Met Val Xaa Cys Thr Cys Ala Leu Cys
 65 70 75 80
 Met Gln Trp Cys

<210> 261
 <211> 1202
 <212> DNA
 <213> Homo sapiens

<400> 261
 gctagcccggt tcgcgttcgt cgtcgatttg ctggcgccag tcccctcgat cgtcttcggt
 60
 ctgtggggcgc gcattcgtctt cggatcgtcg ggaatcatca acggttacgc gggggcctta
 120
 ttcaaagcgc tcggctggat tccgatcttt tccgaagatc cgtcgtggtc ctccggtact
 180
 ggcacggtct accttgccag tctcgtcctg gccatcatga tcttgccaat tatcactgct
 240
 gttagccgcg acgtcatgcc ccgaacgccc catgatcaag tcgaggccgc gctcgccttc
 300
 ggatcgacgc gctgggaggt catcaagctt gcagtgttcc cccactcgcg gtccggcatc
 360

atttccggat ccatgttggg tctaggacgc gccctcggcg agaccctggc tgtcaccctc
 420
 atcctgcaga cgatgagccc catggcgctc aaacagaacc tcaacctgtc gatcttcgtc
 480
 ggtggtgaga cattcgcgtc gaagattgcc ggtaacttct ccgaggccat tagcgatccc
 540
 acctcgctgg gtgccctcgt ggcgtcggcc ctggccctgt tcgtcattac cttegtggtc
 600
 aacgcgactg cccggttgat tgcggcgaag ggggttaagc gatgagcgcc accaccctcg
 660
 accacatcac ccaccatggc gacaacacgc ccggacagct agatctctcc cgcccgtctg
 720
 gtaaacggac tatcaagagc ggctgcgcct caacattcat gatcgtggcc accgtactgg
 780
 ctgttatccc actggcctgg ctgctcttcg cggccgtccg gcgcggcatc ggatcaactat
 840
 tccacgcgtc gtggtggacc cactcgatgg atccctcctt cgacttggcc gagcagggcg
 900
 ccattccacgc tatcgtcgga acccttgaaa ttggccttat tacatcgatt atctcggtag
 960
 cgatcgctct gatgaccgcg atcttcctag tcgagtagc ccgcggaact aagatcgcca
 1020
 aggtcattag cttegcgcgc gacgtgctaa ccggtgtacc ttcaatcgtc gcggccctct
 1080
 tcgtcttcgc cgtagtcggt accaccttcg gtggcaccca atccgcgtgg gcctcctcgt
 1140
 tggccctcat gatcctcatg gttccgacgg tgctgcgac aaccgaggaa atgtcgaagc
 1200
 tt
 1202

<210> 262

<211> 214

<212> PRT

<213> Homo sapiens

<400> 262

Ala	Ser	Pro	Val	Ala	Phe	Val	Val	Asp	Leu	Leu	Ala	Ala	Val	Pro	Ser
1				5				10					15		
Ile	Val	Phe	Gly	Leu	Trp	Gly	Gly	Ile	Val	Phe	Gly	Ser	Ser	Gly	Ile
			20					25					30		
Ile	Asn	Gly	Tyr	Ala	Gly	Ala	Leu	Phe	Lys	Ala	Leu	Gly	Trp	Ile	Pro
			35				40					45			
Ile	Phe	Ser	Glu	Asp	Pro	Ser	Trp	Ser	Ser	Ala	Thr	Gly	Thr	Val	Tyr
			50				55				60				
Leu	Ala	Ser	Leu	Val	Leu	Ala	Ile	Met	Ile	Leu	Pro	Ile	Ile	Thr	Ala
65				70						75				80	
Val	Ser	Arg	Asp	Val	Met	Pro	Arg	Thr	Pro	His	Asp	Gln	Val	Glu	Ala
			85					90					95		
Ala	Leu	Ala	Leu	Gly	Ser	Thr	Arg	Trp	Glu	Val	Ile	Lys	Leu	Ala	Val
			100					105					110		
Phe	Pro	His	Ser	Arg	Ser	Gly	Ile	Ile	Ser	Gly	Ser	Met	Leu	Gly	Leu
			115				120					125			
Gly	Arg	Ala	Leu	Gly	Glu	Thr	Leu	Ala	Val	Thr	Leu	Ile	Leu	Gln	Thr

```

      130              135              140
Met Ser Pro Met Ala Leu Lys Gln Asn Leu Asn Leu Ser Ile Phe Val
145              150              155              160
Gly Gly Glu Thr Phe Ala Ser Lys Ile Ala Gly Asn Phe Ser Glu Ala
      165              170              175
Ile Ser Asp Pro Thr Ser Leu Gly Ala Leu Val Ala Ser Ala Leu Ala
      180              185              190
Leu Phe Val Ile Thr Phe Val Val Asn Ala Thr Ala Arg Leu Ile Ala
      195              200              205
Ala Lys Gly Val Lys Arg
      210

```

<210> 263
 <211> 424
 <212> DNA
 <213> Homo sapiens

```

<400> 263
acgcgtgagt gctctgcgct ggaaacaacg gtgatagagc ccatccgcgc tgaactttcc
60
gacgtggtgc tcgtgaacaa gctcgaaaag tatgtacgcg aacgtacctc ggaagacgtt
120
gcgcacatgg aagaggatgc ggaccagacg ggcaacgaca tcctcacgac gatcctgctg
180
tcgaactggg atccactatt ggatatgacg acgcaggatc atgtgctggc catgcaaaag
240
gcttatatgg cctcgccatt ccgtgccaat ttggacctgg catacccatc ttcgacgcc
300
caggcccagt cccagccggc gatgccgcgc tgggagacag ggacctcagc cagtagcatg
360
gcggatgctc gtgaatttgc gctgctgaag ctgtacctgc gtagcttgct gcagaagcac
420
gann
424

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<210> 264
 <211> 99
 <212> PRT
 <213> Homo sapiens

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<400> 264
Met Glu Glu Asp Ala Asp Gln Thr Gly Asn Asp Ile Leu Thr Thr Ile
1      5      10      15
Leu Leu Ser Asn Trp Asp Pro Leu Leu Asp Met Thr Thr Gln Asp His
      20      25      30
Val Leu Ala Met Gln Lys Ala Tyr Met Ala Ser Pro Phe Arg Ala Asn
      35      40      45
Leu Asp Leu Ala Tyr Pro Ser Ser Thr Pro Gln Ala Gln Ser Gln Pro
      50      55      60
Ala Met Pro Pro Trp Glu Thr Gly Thr Ser Ala Ser Ser Met Ala Asp
65      70      75      80
Ala Arg Glu Phe Ala Leu Leu Lys Leu Tyr Leu Arg Ser Leu Leu Gln
      85      90      95
Lys His Xaa

```

<210> 265
 <211> 360
 <212> DNA
 <213> Homo sapiens

<400> 265
 ncgtacggcc ctggcgccg catggacgag ggataccatt ccggcatgac ggtgccgggt
 60
 gccttcgact ccctcatcgg caagctcatc atcactgggtg atagccgtga gcaagccctg
 120
 gctcgagctg cccgcgcct cgacgaaatc gtcacgacg gcatgccgac ggtcattccc
 180
 tttcaccagg cgggtggttca cgacccggct ttcactgccg ccgacggctg cttcggcgctc
 240
 tttaccgact ggatcgaaac cgagttcgac aacaagatcg agccatacac cgggtctctg
 300
 ggcgagtctg ccaattccga gcctcctcgt gaggtcgctg tcgaggtcaa cggtaaacgc
 360

<210> 266
 <211> 120
 <212> PRT
 <213> Homo sapiens

<400> 266
 Xaa Tyr Gly Pro Gly Val Arg Met Asp Glu Gly Tyr His Ser Gly Met
 1 5 10 15
 Thr Val Pro Gly Ala Phe Asp Ser Leu Ile Gly Lys Leu Ile Ile Thr
 20 25 30
 Gly Asp Ser Arg Glu Gln Ala Leu Ala Arg Ala Ala Arg Ala Leu Asp
 35 40 45
 Glu Ile Val Ile Asp Gly Met Pro Thr Val Ile Pro Phe His Gln Ala
 50 55 60
 Val Val His Asp Pro Ala Phe Thr Ala Ala Asp Gly Cys Phe Gly Val
 65 70 75 80
 Phe Thr Asp Trp Ile Glu Thr Glu Phe Asp Asn Lys Ile Glu Pro Tyr
 85 90 95
 Thr Gly Ser Leu Gly Glu Ser Ala Asn Ser Glu Pro Pro Arg Glu Val
 100 105 110
 Val Val Glu Val Asn Gly Lys Arg
 115 120

<210> 267
 <211> 471
 <212> DNA
 <213> Homo sapiens

<400> 267
 natcctcaac gtgtgttcag ttccacgaga aagatcatgt tcgtcatcgg atcgatgccg
 60
 ttaacgcac ctagtcaatc caccgatggc gaccctggca aaaaatacga ggtgacttgg
 120

ctagatctcg ggcaccttca ccctagtcgg ccgggactcg tcactatcac cacaactgtc
 180
 gatgatgacg tcatcacctc ttcccaggt aatgtcggca acctccaccg cggggatgaa
 240
 aaacttttcg aagctcgcga ttaccgccag attccgatgc ttgcatcacg tcatggctgg
 300
 acagctccat tcattggtga gaccggcgca gcccatgcca tcgaggatgc gatgggcatt
 360
 accatcccaa ctgcgctggc atggatacga acctgctcg ctgagttcag cagaatcacc
 420
 tcacacttca catttttgtc atgggtaggc catcactgtg atgatgccg c
 471

<210> 268

<211> 157

<212> PRT

<213> Homo sapiens

<400> 268

Xaa	Pro	Gln	Arg	Val	Phe	Ser	Ser	Thr	Arg	Lys	Ile	Met	Phe	Val	Ile
1				5					10					15	
Gly	Ser	Met	Pro	Leu	Thr	His	Pro	Ser	Gln	Ser	Thr	Asp	Gly	Asp	Pro
			20					25					30		
Gly	Lys	Lys	Tyr	Glu	Val	Thr	Trp	Leu	Asp	Leu	Gly	His	Leu	His	Pro
		35					40					45			
Ser	Arg	Pro	Gly	Leu	Val	Thr	Ile	Thr	Thr	Thr	Val	Asp	Asp	Asp	Val
		50				55					60				
Ile	Thr	Ser	Ser	Gln	Val	Asn	Val	Gly	Asn	Leu	His	Arg	Gly	Asp	Glu
65				70					75					80	
Lys	Leu	Phe	Glu	Ala	Arg	Asp	Tyr	Arg	Gln	Ile	Pro	Met	Leu	Ala	Ser
			85					90					95		
Arg	His	Gly	Trp	Thr	Ala	Pro	Phe	Ile	Gly	Glu	Thr	Gly	Ala	Ala	His
		100					105						110		
Ala	Ile	Glu	Asp	Ala	Met	Gly	Ile	Thr	Ile	Pro	Thr	Arg	Val	Ala	Trp
		115				120						125			
Ile	Arg	Thr	Leu	Leu	Ala	Glu	Phe	Ser	Arg	Ile	Thr	Ser	His	Phe	Thr
	130					135					140				
Phe	Leu	Ser	Trp	Val	Gly	His	His	Cys	Asp	Asp	Ala	Gly			
145				150						155					

<210> 269

<211> 387

<212> DNA

<213> Homo sapiens

<400> 269

acgcgtgtcg tgtttccaga aaaaaccaat aaattagagt ttatggtaga agtgattgct
 60
 gatatgacgg taatcaatcc atttgatttc tttgtggaaa gctacgcaga agactaccca
 120
 tttgcttatg acaaagctct taaaaaagag ttagaacctt atttacaggt ttctgaacct
 180
 tgttcggttac tcgacaaatg gctgtctggt gttgatcgtg aaaaaacacc gatcaatgat
 240

tttctagtcg caataaacag tcgccttgcc ggtgatattg gctatggat tcgcttagaa
 300
 ccgggcgttc agtcacctga agaaacgctc acattaatga aaggctcttg tcgcgatacc
 360
 tcgggggttat tgggtcaaact actacgc
 387

<210> 270

<211> 129

<212> PRT

<213> Homo sapiens

<400> 270

Thr	Arg	Val	Val	Phe	Pro	Glu	Lys	Thr	Asn	Lys	Leu	Glu	Phe	Met	Val
1				5					10					15	
Glu	Val	Ile	Ala	Asp	Met	Thr	Val	Ile	Asn	Pro	Phe	Asp	Phe	Phe	Val
			20					25					30		
Glu	Ser	Tyr	Ala	Glu	Asp	Tyr	Pro	Phe	Ala	Tyr	Asp	Lys	Ala	Leu	Lys
	35						40				45				
Lys	Glu	Leu	Glu	Pro	Tyr	Leu	Gln	Val	Ser	Glu	Pro	Cys	Ser	Leu	Leu
	50					55					60				
Asp	Lys	Trp	Leu	Ser	Gly	Val	Asp	Arg	Glu	Lys	Thr	Pro	Ile	Asn	Asp
65					70					75				80	
Phe	Leu	Val	Ala	Ile	Asn	Ser	Arg	Leu	Ala	Gly	Asp	Ile	Gly	Tyr	Gly
			85						90					95	
Ile	Arg	Leu	Glu	Pro	Gly	Val	Gln	Ser	Pro	Glu	Glu	Thr	Leu	Thr	Leu
		100						105					110		
Met	Lys	Gly	Ser	Cys	Arg	Asp	Thr	Ser	Gly	Leu	Leu	Val	Gln	Ile	Leu
		115					120					125			

Arg

<210> 271

<211> 443

<212> DNA

<213> Homo sapiens

<400> 271

gccggcacca acggaaagtc ctctaccgcg cgcattggctg attcgctttt gcgtgccttc
 60
 caccgccgag tgggttttggg aaccagccca cacctgcagc gcgttactga gcgcacggc
 120
 attgatggcc agcccattca cccgcgcgat tatgtacgca tctggcacga gattaagcca
 180
 tttgtggaaa tggtcgatgc cgaatcggac gtgcctatgt ctaagttcga ggtcttcgtg
 240
 ggctgtcct atgctgcgtt tgccgacgcc cccggggacg tcgctgtcgt cgaagtcggc
 300
 cttggcggac gttgggacgc taccaatgtg gtcaacgcgg atgtctctgt cattaccccg
 360
 gtgggcatgg accacacgga ttacctgggg gagacgatca ctgaaatcgc aggcgagaaa
 420
 gctggcatta ttaagccacg cgt
 443

<210> 272
 <211> 147
 <212> PRT
 <213> Homo sapiens

<400> 272
 Ala Gly Thr Asn Gly Lys Ser Ser Thr Ala Arg Met Val Asp Ser Leu
 1 5 10 15
 Leu Arg Ala Phe His Arg Arg Val Gly Leu Val Thr Ser Pro His Leu
 20 25 30
 Gln Arg Val Thr Glu Arg Ile Gly Ile Asp Gly Gln Pro Ile His Pro
 35 40 45
 Arg Asp Tyr Val Arg Ile Trp His Glu Ile Lys Pro Phe Val Glu Met
 50 55 60
 Val Asp Ala Glu Ser Asp Val Pro Met Ser Lys Phe Glu Val Phe Val
 65 70 75 80
 Gly Leu Ser Tyr Ala Ala Phe Ala Asp Ala Pro Gly Asp Val Ala Val
 85 90 95
 Val Glu Val Gly Leu Gly Gly Arg Trp Asp Ala Thr Asn Val Val Asn
 100 105 110
 Ala Asp Val Ser Val Ile Thr Pro Val Gly Met Asp His Thr Asp Tyr
 115 120 125
 Leu Gly Glu Thr Ile Thr Glu Ile Ala Gly Glu Lys Ala Gly Ile Ile
 130 135 140
 Lys Pro Arg
 145

<210> 273
 <211> 864
 <212> DNA
 <213> Homo sapiens

<400> 273
 caaagtaaga ctgcttcaaa ttttgtgttc tgctctgcag ctgctcccc cctgctgtcg
 60
 aagagaagcc aaagcccccc cccccacct caaaggctcg gaagtctggc atccctactt
 120
 ccgagcctgg atcccagtaa ggatcttgcc ctccctgcaa caccgagtgc cttagacagc
 180
 tgctgcctga gaactggcct ccagccggtg tcttcattcc atggggctcc ctgctgactg
 240
 catttctga tctgggatga tgtttaccag cccaaaacca gtcattgtct tccaaaagct
 300
 tctctttgat agaattttga ggccatgcca cctcccttcc agtccacatg gaattccaga
 360
 atcagtcaca gcctctgatt ttttccaaga agagattgcc ttcaccattg ttaaatgtca
 420
 gcctgtacgg cagagacatg gtggtctgca caagcctgga caagttcttc catattgatg
 480
 gtgggagcaa cccctgtaat ctactccttg gaaggatttt ttgctttgct tatgaaaagc
 540
 tgtgcttgag acttaggtac ttttctcacg tggacacact gatcccatcc catattgcat
 600

ctttgaagag atggatatca agtacacttt ggtagctgaa ataatcatat ctttctgatg
 660
 tctattgtat ctcttttgag gaaaagaaca cacattttta atggagattg gctgctttca
 720
 ggtatgtgtg tctatcattg aaagagcatg gactcaaaca tcagccctga gttcttgagt
 780
 ccaccaact cccatcttct tgtggcacag gaaagctgcc ctctccctct cccaccacac
 840
 tcctgactaa tgcccttcac gcgt
 864

<210> 274

<211> 116

<212> PRT

<213> Homo sapiens

<400> 274

Met Trp Thr Gly Arg Glu Val Ala Trp Pro Gln Asn Ser Ile Lys Glu
 1 5 10 15
 Lys Leu Leu Glu Glu His Asp Trp Phe Trp Ala Gly Lys His His Pro
 20 25 30
 Arg Ser Gly Asn Ala Val Ser Arg Glu Pro His Gly Met Arg Thr Pro
 35 40 45
 Ala Gly Gly Gln Phe Ser Gly Ser Ser Cys Leu Arg His Ser Val Leu
 50 55 60
 Gln Gly Gly Gln Asp Pro Tyr Trp Asp Pro Gly Ser Glu Val Gly Met
 65 70 75 80
 Pro Asp Phe Arg Ala Phe Glu Val Gly Gly Gly Phe Gly Phe Ser
 85 90 95
 Ser Thr Ala Gly Gly Ser Glu Leu Gln Ser Arg Thr Gln Asn Leu Lys
 100 105 110
 Gln Ser Tyr Phe
 115

<210> 275

<211> 911

<212> DNA

<213> Homo sapiens

<400> 275

naaatttaaa ggaacctccc ttctataacg gagagtattt attgcagctt tcctttctgt
 60
 ttattttcag gaatgaaagg aattaccag ccttctgctt ttatacctac agctgaaagt
 120
 aattcctttc agcctcaggt gaagactttg ccatctccaa ttgatgctaa acagcagttg
 180
 caacggaaaa tccagaagaa gcagcaagaa cagaaactac aatccccctt gccaggagaa
 240
 tctgcagcaa aaaagtcaga aagtgtaca agcaatggag tgactaatct tcctaattga
 300
 aatccttcaa tcctttctcc tcaacctatt ggtatcggtg tggcagctgt ccctagctcc
 360
 attccgggtcc agcggactag gcaattggta acttcaccga gtccaatgag ttcttctnga
 420

cggaaggtt cttccctca atgtacaggt ggctactcag cacatgcagt ctgtgaaaca
 480
 ggcaccaaag actccccaga acgttccagc agtctctggg ggaatcggtc tgccccggcac
 540
 cgttaccctc agatcttacc caaaccagcg aacaccagtg cactcaccat tcgctctcca
 600
 actactgtcc tctttactag tagtcccatc aaaactgctg ttgtaccgcg ttcacacatg
 660
 agttctctaa atgtgggtgaa aatgacaaca atatccctca caccagcaa cagtaacacc
 720
 cctcttaaac attctgcctc agtcagcagt gctacaggaa caacagaaga atcaaggagt
 780
 gttccacaga tcaagaatgg ttctgtcgtg tcgcttcagt ctctggggtc caggagcagc
 840
 agtgcggggg gaacatctgc tgtggaagtc aaagtggaac ccgaaacatc atcagatgag
 900
 catcctgtac a
 911

<210> 276

<211> 279

<212> PRT

<213> Homo sapiens

<400> 276

Met	Lys	Gly	Ile	Thr	Gln	Pro	Ser	Ala	Phe	Ile	Pro	Thr	Ala	Glu	Ser
1				5				10					15		
Asn	Ser	Phe	Gln	Pro	Gln	Val	Lys	Thr	Leu	Pro	Ser	Pro	Ile	Asp	Ala
			20					25					30		
Lys	Gln	Gln	Leu	Gln	Arg	Lys	Ile	Gln	Lys	Lys	Gln	Gln	Glu	Gln	Lys
		35					40					45			
Leu	Gln	Ser	Pro	Leu	Pro	Gly	Glu	Ser	Ala	Ala	Lys	Lys	Ser	Glu	Ser
		50				55					60				
Ala	Thr	Ser	Asn	Gly	Val	Thr	Asn	Leu	Pro	Asn	Gly	Asn	Pro	Ser	Ile
65				70					75				80		
Leu	Ser	Pro	Gln	Pro	Ile	Gly	Ile	Val	Val	Ala	Ala	Val	Pro	Ser	Pro
			85					90					95		
Ile	Pro	Val	Gln	Arg	Thr	Arg	Gln	Leu	Val	Thr	Ser	Pro	Ser	Pro	Met
			100				105						110		
Ser	Ser	Ser	Xaa	Arg	Gln	Ser	Ser	Ser	Pro	Gln	Cys	Thr	Gly	Gly	His
		115				120					125				
Ser	Ala	His	Ala	Val	Cys	Glu	Thr	Gly	Thr	Lys	Asp	Ser	Pro	Glu	Arg
		130			135					140					
Ser	Ser	Ser	Pro	Gly	Gly	Asn	Arg	Ser	Ala	Arg	His	Arg	Tyr	Pro	Gln
145				150					155					160	
Ile	Leu	Pro	Lys	Pro	Ala	Asn	Thr	Ser	Ala	Leu	Thr	Ile	Arg	Ser	Pro
			165					170					175		
Thr	Thr	Val	Leu	Phe	Thr	Ser	Ser	Pro	Ile	Lys	Thr	Ala	Val	Val	Pro
			180					185					190		
Ala	Ser	His	Met	Ser	Ser	Leu	Asn	Val	Val	Lys	Met	Thr	Thr	Ile	Ser
		195				200					205				
Leu	Thr	Pro	Ser	Asn	Ser	Asn	Thr	Pro	Leu	Lys	His	Ser	Ala	Ser	Val
		210				215					220				
Ser	Ser	Ala	Thr	Gly	Thr	Thr	Glu	Glu	Ser	Arg	Ser	Val	Pro	Gln	Ile


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225          230          235          240
Lys Asn Gly Ser Val Val Ser Leu Gln Ser Pro Gly Ser Arg Ser Ser
          245          250          255
Ser Ala Gly Gly Thr Ser Ala Val Glu Val Lys Val Glu Pro Glu Thr
          260          265          270
Ser Ser Asp Glu His Pro Val
          275

```

<210> 277
 <211> 652
 <212> DNA
 <213> Homo sapiens

```

<400> 277
nnaccggtgg ggactctcgc tgaggtcctt aatggccctt ctcgtgtccc ggacggcacc
60
atgaaccttg ttggtgggct gcgtcaggca atggccacca ctggttactc ggaggtcaaa
120
gagttccagc gcacgcagct gacgattcgc taaccgttcc accacgcaga atggtgttcc
180
ggtgagcggg tggatagcta gccttcggcc atgagtgaag tgcccgatga attggtcgtg
240
ttgctgtggc cgattgacaa catggacgcc gccctcatcc atctgcttgc cgaaagggtc
300
cggattactc gcgaggtagg ccgcctcaag gcggagtgcg gtttacctcc ggccgacccc
360
gcccgtgagg ctgagcagat cgcgcggttg cggcagttag cggtcgagtc gaacctcgac
420
cccgaattcg cgcagaaggt catcacgttc atcgtggccg aggtggtgcg tcaccacgaa
480
gctattgctg acgattctgg cgacgactct ggagtggcgg atacggggga ggcggtatgc
540
cctgggtcgg gcagctgagt tacagatcag gcatgacgt cgccctggtg caccttcgac
600
gggattccga cgacgactgt gccgggggcg acatccttga cgaccaacgc gt
652

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<210> 278
 <211> 115
 <212> PRT
 <213> Homo sapiens

```

<400> 278
Met Ser Glu Val Pro Asp Glu Leu Val Val Leu Arg Gly Ala Ile Asp
1          5          10          15
Asn Met Asp Ala Ala Leu Ile His Leu Leu Ala Glu Arg Phe Arg Ile
          20          25          30
Thr Arg Glu Val Gly Arg Leu Lys Ala Glu Cys Gly Leu Pro Pro Ala
          35          40          45
Asp Pro Ala Arg Glu Ala Glu Gln Ile Ala Arg Leu Arg Gln Leu Ala
          50          55          60
Val Glu Ser Asn Leu Asp Pro Glu Phe Ala Gln Lys Val Ile Thr Phe
65          70          75          80
Ile Val Ala Glu Val Val Arg His His Glu Ala Ile Ala Asp Asp Ser

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85 90 95
 Gly Asp Asp Ser Gly Val Ala Asp Thr Gly Glu Ala Asp Val Pro Gly
 100 105 110
 Ser Gly Ser
 115

<210> 279
 <211> 348
 <212> DNA
 <213> Homo sapiens

<400> 279
 cgggaggtca cacaagcatt caaaccatag cagatggtaa atgttatgtt atgtgtattt
 60
 taccacaatc cttaaaaaga aaagaaagaa aggcataatg aaccacctagt tacctctcat
 120
 ccagcttcaa aattgtcagt gcatgggtcaa tcttgtctta tctgcccctc acccaccctt
 180
 ttccagaaag aagaccaga ggattccaca tctgcctgga aaccacgacc agtctcgact
 240
 ggaagtgtgt gttaatgttg catgtattca taaaacctct aggcatttct agtgtccctc
 300
 agaatttttc caaattcagg caaacacaga aattacttcc aaaaattt
 348

<210> 280
 <211> 99
 <212> PRT
 <213> Homo sapiens

<400> 280
 Met Cys Ile Leu Pro Gln Ser Leu Lys Arg Lys Glu Arg Lys Ala Tyr
 1 5 10 15
 Gly Thr Pro Ser Tyr Leu Ser Ser Ser Phe Lys Ile Val Ser Ala Trp
 20 25 30
 Ser Ile Leu Ser Tyr Leu Pro Leu Thr His Pro Phe Pro Glu Arg Arg
 35 40 45
 Pro Arg Gly Phe His Ile Cys Leu Glu Thr Thr Thr Ser Leu Asp Trp
 50 55 60
 Lys Leu Leu Leu Met Leu His Val Phe Ile Lys Pro Leu Gly Ile Ser
 65 70 75 80
 Ser Val Pro Gln Asn Phe Ser Lys Phe Arg Gln Thr Gln Lys Leu Leu
 85 90 95
 Pro Lys Ile

<210> 281
 <211> 384
 <212> DNA
 <213> Homo sapiens

<400> 281
 agatctgcgc agatcgataa tggattaaag actcttgacg ctggagtcac cgagatgaac
 60

aacaaggtgt tgggggcaac gaaggctgtc ggtgattcca ccactaccgt caaccaggtg
120
aattctgcgt taggaantgc cgactcagcg gcagagaaga cgtcgagcgc cgttactcag
180
acgcgcgtgg gtgcccaggc gattaccggc gctgctcaaa atgtcatggc tgattcccaa
240
gctgtcaact cagccatggt tccgcttatt aataacgtga caaagaatct tcctaccttg
300
caaaaacagg ccaggaatct cgtgtcagtg aacggtaccc tgcagaaccc caacggtgat
360
tctgtcatta agattcaaca gacc
384

<210> 282
<211> 110
<212> PRT
<213> Homo sapiens

<400> 282
Met Asn Asn Lys Val Leu Gly Ala Thr Lys Ala Val Gly Asp Ser Thr
1 5 10 15
Thr Thr Val Asn Gln Val Asn Ser Ala Leu Gly Xaa Ala Asp Ser Ala
20 25 30
Ala Glu Lys Thr Ser Ser Ala Val Thr Gln Thr Arg Val Gly Ala Gln
35 40 45
Ala Ile Thr Gly Ala Ala Gln Asn Val Met Ala Asp Ser Gln Ala Val
50 55 60
Asn Ser Ala Met Val Pro Leu Ile Asn Asn Val Thr Lys Asn Leu Pro
65 70 75 80
Thr Leu Gln Lys Gln Ala Arg Asn Leu Val Ser Val Asn Gly Thr Leu
85 90 95
Gln Asn Pro Asn Gly Asp Ser Val Ile Lys Ile Gln Gln Thr
100 105 110

<210> 283
<211> 426
<212> DNA
<213> Homo sapiens

<400> 283
cgcgtagacc aatgtgagac ggccgtcacc aagggcatgc gcgacaagtc ggttggtagc
60
ggaccggata ttgtgcgtcg cgagctgcgc catgtcgtga cgagcggcac gattgtcgat
120
ggaagcgtac tggctgacga attgagcagc tactgcatga gtatcaagga gcacgtccgc
180
tctgatggcc tatccgagtt tggcatctgc accctcgacg ccgccaccgc cgagttccga
240
tacaatgacat tcgtcgacga tgccgtgctg tcacaactcg agacattgct gcgttctcta
300
cgcatacaagg aagtcttgca tgaaaaaggg gtcattgttc cttccacgct gcgcttgatc
360
cgcaacgcgg tgcccaccac ctgccaaatt accatgctca agcctgatac cgaattgtcg
420

gagaga
426

<210> 284
<211> 142
<212> PRT
<213> Homo sapiens

<400> 284
Arg Val Asp Gln Cys Glu Thr Ala Val Thr Lys Gly Met Arg Asp Lys
1 5 10 15
Ser Val Gly Ser Gly Pro Asp Ile Val Arg Arg Glu Leu Arg His Val
20 25 30
Val Thr Ser Gly Thr Ile Val Asp Gly Ser Val Leu Ala Asp Glu Leu
35 40 45
Ser Ser Tyr Cys Met Ser Ile Lys Glu His Val Arg Ser Asp Gly Leu
50 55 60
Ser Glu Phe Gly Ile Cys Thr Leu Asp Ala Ala Thr Ala Glu Phe Arg
65 70 75 80
Tyr Met Thr Phe Val Asp Asp Ala Val Leu Ser Gln Leu Glu Thr Leu
85 90 95
Leu Arg Ser Leu Arg Ile Lys Glu Val Leu His Glu Lys Gly Val Met
100 105 110
Leu Pro Ser Thr Leu Arg Leu Ile Arg Asn Ala Val Pro Thr Thr Cys
115 120 125
Gln Ile Thr Met Leu Lys Pro Asp Thr Glu Leu Ser Glu Arg
130 135 140

<210> 285
<211> 345
<212> DNA
<213> Homo sapiens

<400> 285
acgcgtgcag tcccttaccg acatgctggc agatgagctc gacggcagcc gcttcaccgg
60
cgattttctca gaaatctaca aacgtcagaa ctcgatcttc ggcatgtaa ggaataactt
120
ttacaaaaaa ggataccgca tcatcaacgt agcgaatggt gtattgcgca agatttcact
180
ggtaagcgca ggcaatgcag acaatgtgaa aggtcaggcc ctgttcttcc gcggtgtggc
240
gcatttcgaa ctcggtcggt tgtttgcaca accctgggggt tatacttcgg acaattcaca
300
ctacggcatc ccgctccgca atgaaatcgt aattggttct attcn
345

<210> 286
<211> 107
<212> PRT
<213> Homo sapiens

<400> 286
Met Leu Ala Asp Glu Leu Asp Gly Ser Arg Phe Thr Gly Asp Phe Ser

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      1             5             10             15
Glu Ile Tyr Lys Arg Gln Asn Ser Ile Phe Gly Asp Val Arg Asn Asn
      20             25             30
Phe Tyr Lys Lys Gly Tyr Arg Ile Ile Asn Val Ala Asn Gly Val Leu
      35             40             45
Arg Lys Ile Ser Leu Val Ser Ala Gly Asn Ala Asp Asn Val Lys Gly
      50             55             60
Gln Ala Leu Phe Phe Arg Gly Val Ala His Phe Glu Leu Val Arg Leu
      65             70             75             80
Phe Ala Gln Pro Trp Gly Tyr Thr Ser Asp Asn Ser His Tyr Gly Ile
      85             90             95
Pro Leu Arg Asn Glu Ile Val Ile Gly Ser Ile
      100             105

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<210> 287

<211> 1379

<212> DNA

<213> Homo sapiens

<400> 287

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nnttaactgc ccctttgcag tctttattct gggacattag cactgtcttg ttatcttgct
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tcagttgagg gattcgggac aatagcagtg ctgatggtaa tgttgccgat ttccctgttt
120
gttttgcagg tcacggccag gggctttggg ccgctgttac agtttgccta cactgccaaag
180
ctgttactca gcagagaaaa catccgcgag gtcacccgct gtgctgagtt cctgcgcagt
240
cacaacctgg aggactcctg cttcagcttc ctgcagaccc agctcctgaa cagtgaggat
300
ggcctgtttg tgtgccgga ggatgctgag tgccagcgcc cacacgagga ctgcgagaac
360
tctgcaggag aggaggagga tgaagaggag gagacgatgg attcagagac ggccaagatg
420
gcttgcccca gggaccagat gcttccagag cccatcagct ttgaggccgc cgccatcccc
480
gtagcagaga aggaagaagc cctgctgccc gagcctgacg tgccacaga caccaaggag
540
agctcagaaa aggacgcgtt aacgcagtac ccagataca agaaatacca gcttgcatgt
600
accaagaatg tctataatgc atcatcacac agtacctcag gttttgcaag cacattccgg
660
gaagataact ctagcaacag cctcaagccg gggcttgcca gggggcagat taaaagtga
720
ccgcccagtg aagagaatga ggaagagagc atcacgctct gcctgtcttg agatgagcct
780
gacgccaagg acagagcggg ggatgtcgag atggaccgga aacagcccag ccctgcccct
840
acccccacgg cccagctgg ggcgcctgc ctggagagat ccaggagcgt ggccctgcgc
900
tctgtcttaa ggtctctgtt cagcataacg aaaagtgttg agctgtcttg cctgcccagt
960
acatctcagc agcactttgc caggagtcca gcctgccctt ttgacaaggg gatcactcag
1020

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ggtgacctta aaactgacta caccoccttc acaggaatt atggacagcc ccacgtgggc
 1080
 cagaaggagg tgtccaactt caccatgggg tcgcccctca gggggcctgg gttggaggct
 1140
 ctctgtaaac aggagggaga gctggaccgg aggagcgtga tcttctctc cagcgcttgt
 1200
 gaccaagtga gcacctcggg gcattcttat tctgggggtga gcagtttgga caaagacctc
 1260
 tctgagccgg tgccaaaggg tctgtgggtg ggagccggcc agtcctccc cagctcgag
 1320
 gcctactccc acggtgggct gatggccgac cacttgccag gaaggatgag gcccaaac
 1379

<210> 288

<211> 428

<212> PRT

<213> Homo sapiens

<400> 288

Met	Val	Met	Leu	Ala	Ile	Ser	Leu	Phe	Val	Leu	Gln	Val	Thr	Ala	Arg
1				5					10					15	
Gly	Phe	Gly	Pro	Leu	Leu	Gln	Phe	Ala	Tyr	Thr	Ala	Lys	Leu	Leu	Leu
			20					25				30			
Ser	Arg	Glu	Asn	Ile	Arg	Glu	Val	Ile	Arg	Cys	Ala	Glu	Phe	Leu	Arg
		35				40						45			
Met	His	Asn	Leu	Glu	Asp	Ser	Cys	Phe	Ser	Phe	Leu	Gln	Thr	Gln	Leu
	50					55					60				
Leu	Asn	Ser	Glu	Asp	Gly	Leu	Phe	Val	Cys	Arg	Lys	Asp	Ala	Ala	Cys
65				70					75					80	
Gln	Arg	Pro	His	Glu	Asp	Cys	Glu	Asn	Ser	Ala	Gly	Glu	Glu	Glu	Asp
			85					90					95		
Glu	Glu	Glu	Glu	Thr	Met	Asp	Ser	Glu	Thr	Ala	Lys	Met	Ala	Cys	Pro
			100					105					110		
Arg	Asp	Gln	Met	Leu	Pro	Glu	Pro	Ile	Ser	Phe	Glu	Ala	Ala	Ala	Ile
	115					120						125			
Pro	Val	Ala	Glu	Lys	Glu	Glu	Ala	Leu	Leu	Pro	Glu	Pro	Asp	Val	Pro
	130					135					140				
Thr	Asp	Thr	Lys	Glu	Ser	Ser	Glu	Lys	Asp	Ala	Leu	Thr	Gln	Tyr	Pro
145				150						155				160	
Arg	Tyr	Lys	Lys	Tyr	Gln	Leu	Ala	Cys	Thr	Lys	Asn	Val	Tyr	Asn	Ala
			165					170						175	
Ser	Ser	His	Ser	Thr	Ser	Gly	Phe	Ala	Ser	Thr	Phe	Arg	Glu	Asp	Asn
		180						185					190		
Ser	Ser	Asn	Ser	Leu	Lys	Pro	Gly	Leu	Ala	Arg	Gly	Gln	Ile	Lys	Ser
	195					200						205			
Glu	Pro	Pro	Ser	Glu	Glu	Asn	Glu	Glu	Glu	Ser	Ile	Thr	Leu	Cys	Leu
	210					215					220				
Ser	Gly	Asp	Glu	Pro	Asp	Ala	Lys	Asp	Arg	Ala	Gly	Asp	Val	Glu	Met
225				230						235				240	
Asp	Arg	Lys	Gln	Pro	Ser	Pro	Ala	Pro	Thr	Pro	Thr	Ala	Pro	Ala	Gly
			245					250					255		
Ala	Ala	Cys	Leu	Glu	Arg	Ser	Arg	Ser	Val	Ala	Ser	Pro	Ser	Cys	Leu
			260					265					270		
Arg	Ser	Leu	Phe	Ser	Ile	Thr	Lys	Ser	Val	Glu	Leu	Ser	Gly	Leu	Pro

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<210> 289
<211> 822
<212> DNA
<213> Homo sapiens
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583

<210> 290
 <211> 183
 <212> PRT
 <213> Homo sapiens

<400> 290
 Met Ala Asp Ser Lys Ser Lys Ala Lys Asp Glu Arg Thr Ala Asp Glu
 1 5 10 15
 Ile Arg Arg Asp Ile Ala Ala Thr Arg Ala Cys Leu Ala Ala Gly Val
 20 25 30
 Glu Asn Leu Val Glu Glu Val His Pro Ala Thr Leu Lys Arg Glu Ala
 35 40 45
 Ser Asp Arg Ala Arg Asp Phe Val Gln Gly Glu Phe Asp Gln Val Lys
 50 55 60
 Ser Gln Val Lys Asp Glu Lys Trp Trp Arg Val Gln Arg Ile Ala Met
 65 70 75 80
 Ala Ala Gly Val Leu Ala Ala Gly Val Val Ser Ile Ile Val Leu Arg
 85 90 95
 Ala Ile Val Gly Arg Ala Thr Gly Ala Thr Ala Arg Arg Lys Leu Glu
 100 105 110
 Lys Leu Gln Leu Ser Gln Ala Lys Arg Val Arg Lys Asp Ala Lys Gln
 115 120 125
 Arg Ser Lys Glu Asp Glu Lys Ala Ala Lys Lys Asn Ala Lys Leu Gly
 130 135 140
 Lys Lys Asn Ala Lys Lys Tyr Gly Lys Leu Asp Thr Asp Asp Ser Ser
 145 150 155 160
 Val Ser Asn Leu Ala Glu Lys Met Leu Lys Gln Ala Ala Val Leu Arg
 165 170 175
 Ala Gln Ala Ala Ala Gly Ala
 180

<210> 291
 <211> 351
 <212> DNA
 <213> Homo sapiens

<400> 291
 ctccacgccg acaagactta cgacgggcgt cgctgccggg ctgagtgcgc ggcccgcctcc
 60
 atcacccccc gcatcgctcg ccgcggcggtg gagaccagcg agcgcttggg ccggtatcgc
 120
 tgggtcgctg agcgcacctt cgcttggtc aaccgctttc ggcgctcgc catccgctac
 180
 gagcggcggtg ctgacatcca cgaagccttc gtgatcctcg gctgcgcct catctgcctc
 240
 aaccagatca gacggttttg ttaggtgctg taaagggaga atggctgcag ctgggctatc
 300
 tgctccctcg tcaaccagaa acaggctgct catcctcact caacaacgcg t
 351

<210> 292
 <211> 87
 <212> PRT

<213> Homo sapiens

<400> 292

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Leu His Ala Asp Lys Thr Tyr Asp Gly Arg Arg Cys Arg Ala Glu Cys
 1           5           10           15
Arg Ala Arg Ser Ile Thr Pro Arg Ile Ala Arg Arg Gly Val Glu Thr
          20           25           30
Ser Glu Arg Leu Gly Arg Tyr Arg Trp Val Val Glu Arg Thr Phe Ala
          35           40           45
Trp Leu Asn Arg Phe Arg Arg Leu Ala Ile Arg Tyr Glu Arg Arg Ala
          50           55           60
Asp Ile His Glu Ala Phe Val Ile Leu Gly Cys Ala Leu Ile Cys Leu
65           70           75           80
Asn Gln Ile Arg Arg Phe Cys
          85

```

<210> 293

<211> 716

<212> DNA

<213> Homo sapiens

<400> 293

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nncttcacca caccggccat caacgcacct cctcgtgata acttgacctt ctgccgaacc
60
ggttaatcag tttagtggcg aggcattgaca cgttgacgag tcagctgtgg tacatgtgcg
120
gaacactcac aatgccacgg cggcatgttg ctgtcgggtca cgacccttat ggtgatcgct
180
gtgagaaccc gaacggcaga tgcgattctg gcggcactgg atctgaacag gtttaagggt
240
gcgaagactt tcgatgttcc agtgtgcgtc atagctgggtg ccgggacagg taaaactcgt
300
gctgtcactc atcgcatctg ctacggtgca gcgacaggca agcttgatcc gcgtcgtacc
360
ctcgcgggtca cttttacgac taaggcagct ggacgatga gaggtcgact cgccgatctg
420
ggggttggtg gtgtgcaggc tcgcactatt cattctgagg cgttgaggca gatcaagttt
480
ttctggcctc gtgcatataa ctgtgagttg ccaccgggtga gtgattctcg tttctcgatg
540
gtggcggaga cgacccatcg cattggtctg ggcaatgaca aggcgtgct gcgcgacttg
600
tccgccgaga tctcgtgggc gaagggtctca aatgtgccga ctgatcaata cgcatccctg
660
gctagggcgg aaggtcgggt ggtggcgagg gtttcggcaa ctgacgtagg acgcgt
716

```

<210> 294

<211> 190

<212> PRT

<213> Homo sapiens

<400> 294

```

Met Leu Leu Ser Val Thr Thr Leu Met Val Ile Ala Val Arg Thr Arg

```

```

      1             5             10             15
Thr Ala Asp Ala Ile Leu Ala Ala Leu Asp Leu Asn Arg Phe Lys Val
      20             25             30
Ala Lys Thr Phe Asp Val Pro Val Cys Val Ile Ala Gly Ala Gly Thr
      35             40             45
Gly Lys Thr Arg Ala Val Thr His Arg Ile Ala Tyr Gly Ala Ala Thr
      50             55             60
Gly Lys Leu Asp Pro Arg Arg Thr Leu Ala Val Thr Phe Thr Thr Lys
65             70             75             80
Ala Ala Gly Thr Met Arg Gly Arg Leu Ala Asp Leu Gly Val Val Gly
      85             90             95
Val Gln Ala Arg Thr Ile His Ser Ala Ala Leu Arg Gln Ile Lys Phe
      100            105            110
Phe Trp Pro Arg Ala Tyr Asn Cys Glu Leu Pro Pro Val Ser Asp Ser
      115            120            125
Arg Phe Ser Met Val Ala Glu Thr Thr His Arg Ile Gly Leu Gly Asn
      130            135            140
Asp Lys Ala Leu Leu Arg Asp Leu Ser Ala Glu Ile Ser Trp Ala Lys
145            150            155            160
Val Ser Asn Val Pro Thr Asp Gln Tyr Ala Ser Leu Ala Arg Ala Glu
      165            170            175
Gly Arg Val Val Ala Gly Val Ser Ala Thr Asp Val Gly Arg
      180            185            190

```

<210> 295
 <211> 417
 <212> DNA
 <213> Homo sapiens

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<400> 295
ttcatatcag gcagtaccg agtccatgcg atcaacaacg tcagcgtatc tttcacccat
60
tctggagtgc accttctcat gggagaaagc ggatcaggaa aaagcaccct catcaatctc
120
ctagctggtc tggatacccc agattcgggg tccgtctacg cagaaggcgt caccgtatct
180
gatcagagcg aggcgagcag agcccaatct cgattacgcc acatcgccgt catcttccag
240
gacgacaacc tcatcgctga gttgaccaat accgagaata ttgcgctacc cctgtgggcg
300
cagggcacat cgaagtccga tgccactgaa atcgcccacg aagccatgcg aaaactagga
360
atcgagtcac tgggcagacg ctaccccggc gaggtctcgg gtggccaacg gcaacgc
417

```

<210> 296
 <211> 139
 <212> PRT
 <213> Homo sapiens

```

<400> 296
Phe Ile Ser Gly Ser Thr Arg Val His Ala Ile Asn Asn Val Ser Val
      1             5             10             15
Ser Phe Thr His Ser Gly Val His Leu Leu Met Gly Glu Ser Gly Ser

```

```

      20      25      30
Gly Lys Ser Thr Leu Ile Asn Leu Leu Ala Gly Leu Asp Thr Pro Asp
      35      40      45
Ser Gly Ser Val Tyr Ala Glu Gly Val Thr Val Ser Asp Gln Ser Glu
      50      55      60
Ala Ser Arg Ala Gln Phe Arg Leu Arg His Ile Ala Val Ile Phe Gln
      65      70      75      80
Asp Asp Asn Leu Ile Ala Glu Leu Thr Asn Thr Glu Asn Ile Ala Leu
      85      90      95
Pro Leu Trp Ala Gln Gly Thr Ser Lys Ser Asp Ala Thr Glu Ile Ala
      100      105      110
His Glu Ala Met Arg Lys Leu Gly Ile Glu Ser Leu Gly Arg Arg Tyr
      115      120      125
Pro Gly Glu Val Ser Gly Gly Gln Arg Gln Arg
      130      135

```

<210> 297

<211> 378

<212> DNA

<213> Homo sapiens

<400> 297

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tacaccatcg gtgaccagat tgtcgaagct ctgcaggtgc actcgaagat gtccgacaag
60
gacgcttggg cgcgtgccat cgagctgctc gacttggtgg ggattccgaa tcccagagtg
120
cgtgccaaag cttttccgca cgagttttcc ggtggcatga ggcaacgagt cgtcatcgcc
180
atggccatcg cgaacgaccc tgacctcatc atcgccgacg agccgacgac ggccctcgac
240
gtgaccatcc aggcccagat tctcgatttg ctgcgcgtag cccagcgtga aaccatcgcg
300
ggcgtcggtta tgatcaccca cgacctcggt gtggtagctg gtctggctga cagggttgcc
360
gtgatgtatg ccggacgc
378

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<210> 298

<211> 126

<212> PRT

<213> Homo sapiens

<400> 298

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Tyr Thr Ile Gly Asp Gln Ile Val Glu Ala Leu Gln Val His Ser Lys
1      5      10      15
Met Ser Asp Lys Asp Ala Trp Ala Arg Ala Ile Glu Leu Leu Asp Leu
      20      25      30
Val Gly Ile Pro Asn Pro Glu Val Arg Ala Lys Ala Phe Pro His Glu
      35      40      45
Phe Ser Gly Gly Met Arg Gln Arg Val Val Ile Ala Met Ala Ile Ala
      50      55      60
Asn Asp Pro Asp Leu Ile Ile Ala Asp Glu Pro Thr Thr Ala Leu Asp
      65      70      75      80
Val Thr Ile Gln Ala Gln Ile Leu Asp Leu Leu Arg Val Ala Gln Arg

```

	85		90		95
Glu Thr His	Ala Gly Val Val Met	Ile Thr His Asp Leu Gly Val Val			
	100	105	110		
Ala Gly Leu Ala Asp Arg Val	Ala Val Met Tyr Ala Gly Arg				
	115	120	125		

<210> 299
 <211> 368
 <212> DNA
 <213> Homo sapiens

<400> 299
 gtgcacgggtt tcgttggcat gcgcaatgac cgggagaact tgcgttttga tccgagactt
 60
 ccagcccaat ggacgtcgat caaacaccac atgtctcattg gcgactctca catgctcggt
 120
 ttcttggaac gtgacgccat tacgttccag attctgtcgg gccatgaccg cgacgtgaca
 180
 gtgcgcgggtg agctctacca cattgggggtt gagccgggtga gggtgccgtt gtccgatcag
 240
 gggccggttg gccttagcct gcgcgttacc catccgatct cgggggttgcg tcgagctgac
 300
 ggttctctta tcaactgcaga agttcccggc agcattgctg agacgattgg gtcttctccg
 360
 atctcgac
 368

<210> 300
 <211> 122
 <212> PRT
 <213> Homo sapiens

<400> 300
 Val His Gly Phe Val Gly Met Arg Asn Asp Arg Glu Asn Leu Arg Phe
 1 5 10 15
 Asp Pro Arg Leu Pro Ala Gln Trp Thr Ser Ile Lys His His Met Leu
 20 25 30
 Ile Gly Asp Ser His Met Leu Val Phe Leu Glu Arg Asp Ala Ile Thr
 35 40 45
 Phe Gln Ile Leu Ser Gly His Asp Arg Asp Val Thr Val Arg Gly Glu
 50 55 60
 Leu Tyr His Ile Gly Val Glu Pro Val Arg Val Pro Leu Ser Asp Gln
 65 70 75 80
 Gly Pro Leu Arg Pro Ser Leu Arg Val Thr His Pro Ile Ser Gly Leu
 85 90 95
 Arg Arg Ala Asp Gly Ser Leu Ile Thr Ala Glu Val Pro Gly Ser Ile
 100 105 110
 Ala Glu Thr Ile Gly Ser Ser Pro Ile Ser
 115 120

<210> 301
 <211> 456
 <212> DNA
 <213> Homo sapiens

<400> 301

ggccgggtta ttgccgccc gtttgtcggg gaaacccggc agaccttcga ggcgaccggc
 60
 aaccggcgcg actattccgt accgcccggc gaaccgacct tgctcgacag gcttacggac
 120
 gcggggccgga cggatgatcg aatcggcaag attgggtgata tctacgcgca caaaggcgtg
 180
 tctcaggtgc gtaaggcaat ggcaatattg gccttggttcg atgaaacact cattgccatg
 240
 gacgacgcgc aggacggcga tctggtcttc accaacttcg tggatttcga catgctctac
 300
 gggcatcgca gggatgtgcc cggctatgcc gccgcgctcg aggttttcga ccggaggctg
 360
 ccggaagcca tggcgaaatt gcggacgggc gatcttctga tcttgacagc cgatcatggc
 420
 tgcgaccgca ccctcaaggg aaccgaccac acgcgt
 456

<210> 302

<211> 152

<212> PRT

<213> Homo sapiens

<400> 302

Gly Arg Val Ile Ala Arg Pro Phe Val Gly Glu Thr Arg Gln Thr Phe
 1 5 10 15
 Glu Arg Thr Gly Asn Arg Arg Asp Tyr Ser Val Pro Pro Pro Glu Pro
 20 25 30
 Thr Leu Leu Asp Arg Leu Thr Asp Ala Gly Arg Thr Val Ile Ala Ile
 35 40 45
 Gly Lys Ile Gly Asp Ile Tyr Ala His Lys Gly Val Ser Gln Val Arg
 50 55 60
 Lys Ala Met Ala Ile Leu Ala Leu Phe Asp Glu Thr Leu Ile Ala Met
 65 70 75 80
 Asp Asp Ala Gln Asp Gly Asp Leu Val Phe Thr Asn Phe Val Asp Phe
 85 90 95
 Asp Met Leu Tyr Gly His Arg Arg Asp Val Pro Gly Tyr Ala Ala Ala
 100 105 110
 Leu Glu Ala Phe Asp Arg Arg Leu Pro Glu Ala Met Ala Lys Leu Arg
 115 120 125
 Thr Gly Asp Leu Leu Ile Leu Thr Ala Asp His Gly Cys Asp Pro Thr
 130 135 140
 Leu Lys Gly Thr Asp His Thr Arg
 145 150

<210> 303

<211> 402

<212> DNA

<213> Homo sapiens

<400> 303

nncgtgggca tcgaggagtt cctcgacatg aagtatcacg cgacgccgat tcacgctcgc
 60

tgacagcggg tttccggaac acatcagcgt tcagacagga gcgaggagac catgtacctg
 120
 ggtgctcagc tggtcagtga cagcgagtac gagcagcgcc tgagacgtgt ccgtgagctc
 180
 atggaccgtc aggggtctgtc ggcgatcatc gtcaccgatc cggccaacat cttctatctg
 240
 atcgggttaca acgcctgggc gttctacacc ccgcagatgc tggtcgtgcc gatcgacgga
 300
 gagatgggcc tctacgctcg cgagatggat cgcattgggc acatcngcac gacgtcgttg
 360
 cccgccgatc agatcgtcgg ttaccgggag agttatgtgc ac
 402

<210> 304

<211> 97

<212> PRT

<213> Homo sapiens

<400> 304

Met	Tyr	Leu	Gly	Ala	Gln	Leu	Phe	Ser	Asp	Ser	Glu	Tyr	Glu	Gln	Arg
1				5					10					15	
Leu	Arg	Arg	Val	Arg	Glu	Leu	Met	Asp	Arg	Gln	Gly	Leu	Ser	Ala	Ile
			20					25					30		
Ile	Val	Thr	Asp	Pro	Ala	Asn	Ile	Phe	Tyr	Leu	Ile	Gly	Tyr	Asn	Ala
		35				40						45			
Trp	Ser	Phe	Tyr	Thr	Pro	Gln	Met	Leu	Phe	Val	Pro	Ile	Asp	Gly	Glu
	50					55					60				
Met	Val	Leu	Tyr	Ala	Arg	Glu	Met	Asp	Arg	Met	Ala	His	Ile	Xaa	Thr
65					70				75				80		
Thr	Ser	Leu	Pro	Ala	Asp	Gln	Ile	Val	Gly	Tyr	Pro	Glu	Ser	Tyr	Val
				85				90					95		

His

<210> 305

<211> 375

<212> DNA

<213> Homo sapiens

<400> 305

nnacgcgtcg gttccgcacg gagcgaccgg atcgcatcga cgagcacgct gcaccagtgc
 60
 gtgtcgtcct ggcgaatatg ggcgatcagc cggtacagtt cgggatcgtc gctcacctcg
 120
 gccgccatct cggatgcgac acgcgcgcct gcgcgctcgg cctccagcaa ctgctcgagc
 180
 gtcgccacca gcgcggcgcg atcttcatgc ggagtcagat cggcgcgggc gtcaggcccc
 240
 tcgccatgcg tcggaatcga catgcagcac cctcctgccg ggatcgatgg cgtaatacgt
 300
 gcgacgggtac acggcgcggtg ttgcacgaac gtgcaaatca gcgcgtgcct cgtgccatat
 360
 acgtcacatc atatg
 375

<210> 306
 <211> 125
 <212> PRT
 <213> Homo sapiens

<400> 306
 Xaa Arg Val Gly Ser Ala Ser Ser Asp Arg Ile Ala Ser Thr Ser Thr
 1 5 10 15
 Leu His Gln Cys Val Ser Ser Trp Arg Ile Trp Ala Ile Ser Arg Tyr
 20 25 30
 Ser Ser Gly Ser Ser Leu Thr Ser Ala Ala Ile Ser Asp Ala Thr Arg
 35 40 45
 Ala Pro Ala Arg Ser Ala Ser Ser Asn Ser Ser Ser Val Ala Thr Ser
 50 55 60
 Ala Ala Arg Ser Ser Cys Gly Val Arg Ser Ala Arg Ala Ser Gly Pro
 65 70 75 80
 Ser Pro Cys Val Gly Ile Asp Met Gln His Pro Pro Ala Arg Ile Asp
 85 90 95
 Gly Val Ile Arg Ala Thr Val His Gly Ala Cys Cys Thr Asn Val Gln
 100 105 110
 Ile Ser Ala Cys Leu Val Pro Tyr Thr Ser His His Met
 115 120 125

<210> 307
 <211> 685
 <212> DNA
 <213> Homo sapiens

<400> 307
 actagttctg gccgctcccc tggggctttg ggtaacaatt gtcagcccca cccatcctag
 60
 ggttaggaag gctattctct ttggccactc tcattcctaag acctatttgg agaacctctg
 120
 gggtttgagt ctttttttca gcagaatgag gcttgatccc gcattatagc acctcgaca
 180
 tttgatgtct cttcttctca cccactcacc ccacctggg ggttggggca aaaaagtggc
 240
 tcaaagctgc ggttcagagt tccttgtaaa caaggctcct ccctcactgt cctcaccctg
 300
 ctccagcaga gggagcagcg gaaggaccac tctgctgcag ccattgctgt ttctaaccga
 360
 gcagaactgg acataatggg aacaggggtct gaagacaatc aatccagggc tgcagtgggt
 420
 gctgagtctg gggaagcctc cacctggagg ggcagctggg cagtggcagc tcccttgga
 480
 tggctcagcc tctggacatc accccaccca accagagccc tggctcttgc tggatgtcca
 540
 cagatgagtg cctgggattg gtctcagcca ctatgggggg gatgtgcagg gagaggtgat
 600
 gagggagtga gcaggactgt ctatgtgcct ctgtcctcat cctgaggctt gggctctgaa
 660
 ttggtgctgc agcactggca cgcgt
 685

<210> 308
 <211> 100
 <212> PRT
 <213> Homo sapiens

<400> 308
 Met Leu Val Ser Asn Pro Ala Glu Leu Asp Ile Met Gly Thr Gly Ser
 1 5 10 15
 Glu Asp Asn Gln Ser Arg Ala Ala Val Gly Ala Glu Ser Gly Glu Ala
 20 25 30
 Ser Thr Trp Arg Gly Ser Trp Ala Val Ala Ala Pro Leu Glu Trp Leu
 35 40 45
 Ser Leu Trp Thr Ser Pro His Pro Thr Arg Ala Leu Ala Leu Ala Gly
 50 55 60
 Cys Pro Gln Met Ser Ala Trp Asp Trp Ser Gln Pro Leu Trp Gly Gly
 65 70 75 80
 Cys Ala Gly Arg Gly Asp Glu Gly Val Ser Arg Thr Val Tyr Val Pro
 85 90 95
 Leu Ser Ser Ser
 100

<210> 309
 <211> 432
 <212> DNA
 <213> Homo sapiens

<400> 309
 caggctcgta ctattcgat ccctgtgcat atgggtcgagg tcatcaataa gctggctcgc
 60
 gtccagcgtc agatgctcca ggacctaggt cgtgagccca ccccggaaga gcttgccaac
 120
 gaactcgata tgaccgcaga gaaggcatt gaggtgcaga aatacggtcg cgagccgac
 180
 tcgctgcata cccactggg tgaggatggc gattctgagt tcggtgacct tattgaggat
 240
 tccgaggcca tcgtgccagc agacgcgctc aacttcaccc tgttgaggga gcagctgcat
 300
 gatgtcctcg ataccttgtc cgagcgagag gccggtgtcg tgctgatgag attcggttg
 360
 accgacggac agcccaagac cctggatgag atcggaag tctacggtgt tactcgggag
 420
 cgcacccgcc ag
 432

<210> 310
 <211> 144
 <212> PRT
 <213> Homo sapiens

<400> 310
 Gln Ala Arg Thr Ile Arg Ile Pro Val His Met Val Glu Val Ile Asn
 1 5 10 15
 Lys Leu Ala Arg Val Gln Arg Gln Met Leu Gln Asp Leu Gly Arg Glu


```

      20      25      30
Pro Thr Pro Glu Glu Leu Ala Asn Glu Leu Asp Met Thr Ala Glu Lys
      35      40      45
Val Ile Glu Val Gln Lys Tyr Gly Arg Glu Pro Ile Ser Leu His Thr
      50      55      60
Pro Leu Gly Glu Asp Gly Asp Ser Glu Phe Gly Asp Leu Ile Glu Asp
65      70      75      80
Ser Glu Ala Ile Val Pro Ala Asp Ala Val Asn Phe Thr Leu Leu Gln
      85      90      95
Glu Gln Leu His Asp Val Leu Asp Thr Leu Ser Glu Arg Glu Ala Gly
      100      105      110
Val Val Ser Met Arg Phe Gly Leu Thr Asp Gly Gln Pro Lys Thr Leu
      115      120      125
Asp Glu Ile Gly Lys Val Tyr Gly Val Thr Arg Glu Arg Ile Arg Gln
      130      135      140

```

<210> 311

<211> 358

<212> DNA

<213> Homo sapiens

<400> 311

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acgcgtatcg aaaatatccc tcccattatt accgctcgcc ctgaactgat ggctcatgaa
60
ctgacgccag aatctcttga tgcgagcctg gagtgggccc atgtggtggt cattggctct
120
ggactgggac aacaagcgtg gggcaaaaaa gcgctacaaa aggtcgagaa ttgtcgtaaa
180
ccgatgctgt gggatgccga cgcgcttaac cttctggcaa tcaatcctga taaacgtcac
240
aatcgcatcc tgacgccaca ccccggcgag gccgcgcggc tgcttagctg cagcgtcgca
300
gaaattgaaa acgatcgctt acttntctgc gcacgtctgg taaaacggta acccgagt
358

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<210> 312

<211> 116

<212> PRT

<213> Homo sapiens

<400> 312

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Thr Arg Ile Glu Asn Ile Pro Pro Ile Ile Thr Ala Arg Pro Glu Leu
1      5      10      15
Met Ala His Glu Leu Thr Pro Glu Ser Leu Asp Ala Ser Leu Glu Trp
      20      25      30
Ala Asp Val Val Val Ile Gly Pro Gly Leu Gly Gln Gln Ala Trp Gly
      35      40      45
Lys Lys Ala Leu Gln Lys Val Glu Asn Cys Arg Lys Pro Met Leu Trp
50      55      60
Asp Ala Asp Ala Leu Asn Leu Leu Ala Ile Asn Pro Asp Lys Arg His
65      70      75      80
Asn Arg Ile Leu Thr Pro His Pro Gly Glu Ala Ala Arg Leu Leu Ser
      85      90      95
Cys Ser Val Ala Glu Ile Glu Asn Asp Arg Leu Leu Xaa Cys Ala Arg

```

100
Leu Val Lys Arg
115

105

110

<210> 313
<211> 347
<212> DNA
<213> Homo sapiens

<400> 313
ncaactgaaa gcattgagat gagcgacgtg ctgtccccct tccacccac caaggccaac
60
acccttggtg gcgaaccg cgacatccgc acctcgaacg cgcacatcat tgccgtcacc
120
agtggcaaag gcggcggtgg caagacctt gtctccgcca acctggccgc cgcgctgacc
180
cgcttgggac tgccgctgct ggtactggac gccgacctgg gcttggccaa cttggacgtg
240
gtgctgaacc tctaccccaa ggtgacgctg cagcatgtgt tcaccggcaa ggcctcgctg
300
caagacgcgg tggtcacggc ccccggcggc ttccatgtgc tgctagc
347

<210> 314
<211> 115
<212> PRT
<213> Homo sapiens

<400> 314
Xaa Thr Glu Ser Ile Glu Met Ser Asp Val Leu Ser Pro Phe His Pro
1 5 10 15
Thr Lys Ala Asn Thr Pro Gly Gly Glu Pro Arg Thr Ile Arg Thr Ser
20 25 30
Asn Ala His Ile Ile Ala Val Thr Ser Gly Lys Gly Val Gly Lys
35 40 45
Thr Phe Val Ser Ala Asn Leu Ala Ala Leu Thr Arg Leu Gly Leu
50 55 60
Arg Val Leu Val Leu Asp Ala Asp Leu Gly Leu Ala Asn Leu Asp Val
65 70 75 80
Val Leu Asn Leu Tyr Pro Lys Val Thr Leu His Asp Val Phe Thr Gly
85 90 95
Lys Ala Ser Leu Gln Asp Ala Val Val Thr Ala Pro Gly Gly Phe His
100 105 110
Val Leu Leu
115

<210> 315
<211> 544
<212> DNA
<213> Homo sapiens

<400> 315
nnacgcgttc gtcaacagga aaacaacaac ggcttctcgc tggagggaac catgcttgcc
60

gaagatatct acgcgatcat gctgttttca tcgctcatcc tggtcgtccc ggggccatcc
 120
 aacaccttgc tgetcagcgc ccgtttccat ttccggctcgc tgcgggcggc gcccttcac
 180
 ctgcttgagg cggtgggcta ctcgctatcc atttcggcat ggggctgggt attggcgcg
 240
 ctgtccgaga gcaatccatg gatcatcagt ctgaccaagg cactctgcgc gctatatgtg
 300
 gcgcttctgg cggatgaagac ctggaatgcc ntcgatccgc agtgcggggc cggtaacttc
 360
 cgccatgggc ccctgcccct gttcgtggca accctgtcga acccgaaggc gctgatcttc
 420
 gccagcgtga tctttcccg caaggcggtc ctcgacttct ggaacaacta cagcatctcg
 480
 ctgctggcct tcttggttgt gctggcgccc atcgggatgc tttgggtcgg gctgggggccc
 540
 ggta
 544

<210> 316

<211> 159

<212> PRT

<213> Homo sapiens

<400> 316

Ile	Tyr	Ala	Ile	Met	Leu	Phe	Ser	Ser	Leu	Ile	Leu	Val	Val	Pro	Gly
1				5					10					15	
Pro	Ser	Asn	Thr	Leu	Leu	Leu	Ser	Ala	Arg	Phe	His	Phe	Gly	Ser	Leu
			20					25					30		
Arg	Ala	Ala	Pro	Phe	Ile	Leu	Leu	Glu	Ala	Leu	Gly	Tyr	Ser	Leu	Ser
		35					40					45			
Ile	Ser	Ala	Trp	Gly	Trp	Val	Leu	Ala	Arg	Leu	Ser	Glu	Ser	Asn	Pro
	50				55					60					
Trp	Ile	Ile	Ser	Leu	Thr	Lys	Ala	Leu	Cys	Ala	Leu	Tyr	Val	Ala	Leu
65					70				75					80	
Leu	Ala	Val	Lys	Thr	Trp	Asn	Ala	Xaa	Asp	Pro	Gln	Cys	Gly	Ala	Gly
			85					90					95		
Asn	Phe	Arg	His	Gly	Pro	Leu	Pro	Leu	Phe	Val	Ala	Thr	Leu	Ser	Asn
			100					105					110		
Pro	Lys	Ala	Leu	Ile	Phe	Ala	Ser	Val	Ile	Phe	Pro	Gly	Lys	Ala	Phe
		115					120					125			
Leu	Asp	Phe	Trp	Asn	Asn	Tyr	Thr	Ile	Ser	Leu	Leu	Ala	Phe	Leu	Val
	130					135					140				
Val	Leu	Ala	Pro	Ile	Gly	Met	Leu	Trp	Val	Gly	Leu	Gly	Ala	Gly	
145					150					155					

<210> 317

<211> 343

<212> DNA

<213> Homo sapiens

<400> 317

nggtcagcct ctcgccagg caattctctt aagatacatg agctgctatg agtaccaaag
 60

ccagaggttt gtccactgag agaagcacat tggaaagggg ggcgtgggcc tgggactgtg
 120
 tggcacttta tgcacggggg gggcctaagg gggnggtcc accaaccatg cactgngggg
 180
 ggggtgtggg taacatgccg tgcattttgg ggggtgtgcca tgagtggcac accatggggg
 240
 tggcatgtgg ggcattgtatg catgtggtgt tggcgcagca aactcagctc ttacctggct
 300
 ggggccagcc tctaaaactt ctcacattgg gctcccttct gac
 343

<210> 318

<211> 98

<212> PRT

<213> Homo sapiens

<400> 318

Met Ser Thr Lys Ala Arg Gly Leu Ser Thr Glu Arg Ser Thr Leu Glu
 1 5 10 15
 Arg Gly Ala Trp Ala Trp Asp Cys Val Ala Leu Tyr Ala Arg Gly Gly
 20 25 30
 Pro Lys Gly Gly Gly Pro Pro Thr Met His Xaa Gly Trp Gly Val Gly
 35 40 45
 Asn Met Pro Cys Ile Leu Gly Val Cys His Glu Trp His Thr Met Gly
 50 55 60
 Val Ala Cys Gly Ala Cys Met His Val Val Leu Ala Gln Gln Thr Gln
 65 70 75 80
 Leu Leu Pro Gly Trp Gly Gln Pro Leu Lys Leu Leu Thr Leu Gly Ser
 85 90 95
 Leu Leu

<210> 319

<211> 429

<212> DNA

<213> Homo sapiens

<400> 319

gaattctcga tgtaccccct cccggcagtc ctattctcga gctgagcggg cacagtggcc
 60
 ccgttaacag tgtggcttgg ggtccaccca gccagagcac gttgcgaaat ggacctagta
 120
 agggcatgat atgtacagga ggcgacgatg ctacgtgcct cgtatatgat ctgactagct
 180
 caactcttcg aacagcatct gctcaaggac ggcgctctcg aaacagtcca tataaaca
 240
 gccattcacc ggaatagac ggatggcgtg tcggcgcaga agtgccggtg ctgcgttata
 300
 cggccccgtc tatggtcaac aatgctagct ggctcgcat gcctgcgcca tcaaaacgca
 360
 catcgctaca gagcaaacac cgcagccttt accgcagctt actcagttag tggactgagt
 420
 atacgtccn
 429

<210> 320
 <211> 101
 <212> PRT
 <213> Homo sapiens

<400> 320
 Met Ile Cys Thr Gly Gly Asp Asp Ala Gln Cys Leu Val Tyr Asp Leu
 1 5 10 15
 Thr Ser Ser Thr Leu Arg Thr Ala Ser Ala Gln Gly Arg Arg Ser Arg
 20 25 30
 Asn Ser Pro Tyr Lys Gln Ser His Ser Pro Gly Ile Asp Gly Trp Arg
 35 40 45
 Val Gly Ala Glu Val Pro Val Leu Ala Tyr Thr Ala Pro Ser Met Val
 50 55 60
 Asn Asn Ala Ser Trp Leu Gly Met Pro Ala Pro Ser Lys Arg Thr Ser
 65 70 75 80
 Leu Gln Ser Lys His Arg Ser Leu Tyr Arg Ser Leu Leu Ser Glu Trp
 85 90 95
 Thr Glu Tyr Thr Ser
 100

<210> 321
 <211> 530
 <212> DNA
 <213> Homo sapiens

<400> 321
 ngtgcacgac gtgctcgcca agtccctcgg gtcctctaata gcgatcaacg tggttcacgc
 60
 caccgtcgat gcgttgacgc agctcgagga gccgaagag gtcgcccgtc gccgcggcaa
 120
 gtccgttgag gagatcgccc cagcagccat gctgcgtgcg cgcaaggagg ccgacgaggc
 180
 cgccgctgct gcccgcatgg agggaaaaggc ggggggttaac tgatgagcaa gctgaagatc
 240
 accagatca agtctggcat cgctaccaag ccaaatcatc gtgagaccct gcgcagcctc
 300
 ggactgaagc gtattggtga caccgtcatc aaggaggacc gcccgagatt ccgcggcatg
 360
 gtccggaccg ttgcgtcacct cgtcaccatg gaagaggtgg actgacatgg ctattgagct
 420
 ccatgacctc aagcccgtc ctgggtgccc caaggccaag acccgcggtg gtcgtggtga
 480
 gggttccaag ggtaagaccg ctgggtcgcg taccaagggc accggtgcac
 530

<210> 322
 <211> 60
 <212> PRT
 <213> Homo sapiens

<400> 322
 Met Ser Lys Leu Lys Ile Thr Gln Ile Lys Ser Gly Ile Ala Thr Lys

```

      1             5             10             15
Pro Asn His Arg Glu Thr Leu Arg Ser Leu Gly Leu Lys Arg Ile Gly
      20             25             30
Asp Thr Val Ile Lys Glu Asp Arg Pro Glu Phe Arg Gly Met Val Arg
      35             40             45
Thr Val Arg His Leu Val Thr Met Glu Glu Val Asp
      50             55             60

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<210> 323

<211> 468

<212> DNA

<213> Homo sapiens

<400> 323

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ntccggaccc gctgtggcca cgtattctgc cgttcctgta ttgctaccag tctaaagaac
60
aacaagtgga cctgtcctta ttgccgggca tatcttcctt cagaaggagt tccagcaact
120
gatgtagcca aaagaatgaa atcagagtat aagaactgcg ctgagtgtga caccctgggt
180
tgcttcagtg aaatgagggc acatattcgg acttgtcaga agtacataga taagtatgga
240
ccactacaag aacttgagga gacagcagca aggtgtgtat gtcccttttg tcagagggaa
300
ctgtatgaag acagcttgct ggatcattgt attactcatc acagatcgga acggaggcct
360
gtgttctgtc cactttgcca tttaataccc gatgagaatc caagcagctt cagtggcagt
420
ttaataagac atctgcaagt tagtcacact ttggtttatg atgatttc
468

```

<210> 324

<211> 156

<212> PRT

<213> Homo sapiens

<400> 324

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Xaa Arg Thr Arg Cys Gly His Val Phe Cys Arg Ser Cys Ile Ala Thr
 1             5             10             15
Ser Leu Lys Asn Asn Lys Trp Thr Cys Pro Tyr Cys Arg Ala Tyr Leu
      20             25             30
Pro Ser Glu Gly Val Pro Ala Thr Asp Val Ala Lys Arg Met Lys Ser
      35             40             45
Glu Tyr Lys Asn Cys Ala Glu Cys Asp Thr Leu Val Cys Leu Ser Glu
      50             55             60
Met Arg Ala His Ile Arg Thr Cys Gln Lys Tyr Ile Asp Lys Tyr Gly
      65             70             75             80
Pro Leu Gln Glu Leu Glu Glu Thr Ala Ala Arg Cys Val Cys Pro Phe
      85             90             95
Cys Gln Arg Glu Leu Tyr Glu Asp Ser Leu Leu Asp His Cys Ile Thr
      100             105             110
His His Arg Ser Glu Arg Arg Pro Val Phe Cys Pro Leu Cys His Leu
      115             120             125
Ile Pro Asp Glu Asn Pro Ser Ser Phe Ser Gly Ser Leu Ile Arg His

```

130 135 140
 Leu Gln Val Ser His Thr Leu Val Tyr Asp Asp Phe
 145 150 155

<210> 325
 <211> 374
 <212> DNA
 <213> Homo sapiens

<400> 325
 acgctgaag ggaggacgag gaagtaacgg gaagcacaag gccgctgctg gggagatggc
 60
 actggagccc cctaggaagc atctcacagg ctgtggccct tggcacgggg atctggggcc
 120
 aggtcgagcg caggtctggg tatcatgcga gtgcggggctc gctggggcgg gaaagagttt
 180
 ggagctctgc tcccaggga tccccactcc cgcagatgac ttgcccgaga gagttctgct
 240
 ggtggatttt gatggaaatt ctatttgatc gcacccactt ggttcactgt gtgcttccgg
 300
 gtccccaggt tttaggtgct tcatgccttg ctgggaacga gacacgctcc tgcctcagt
 360
 gaatcttcag tcta
 374

<210> 326
 <211> 108
 <212> PRT
 <213> Homo sapiens

<400> 326
 Met Lys His Leu Lys Pro Gly Asp Pro Glu Ala His Ser Glu Pro Ser
 1 5 10 15
 Gly Cys Asp Gln Ile Glu Phe Pro Ser Lys Ser Thr Ser Arg Thr Leu
 20 25 30
 Ser Gly Lys Ser Ser Ala Gly Val Gly Ile Pro Trp Glu Gln Ser Ser
 35 40 45
 Lys Leu Phe Pro Ala Pro Ala Ser Pro His Ser His Asp Thr Gln Thr
 50 55 60
 Cys Ala Arg Pro Gly Pro Arg Ser Pro Cys Gln Gly Pro Gln Pro Val
 65 70 75 80
 Arg Cys Phe Leu Gly Gly Ser Ser Ala Ile Ser Pro Ala Ala Ala Leu
 85 90 95
 Cys Phe Pro Leu Leu Pro Arg Pro Pro Phe Thr Arg
 100 105

<210> 327
 <211> 538
 <212> DNA
 <213> Homo sapiens

<400> 327
 cactataaaa tccagtttgg ggcccgtgtt ctttctatt ggtctgtcag gtgaaaaact
 60

ccggctgggg gaaaagcgtc cggtgggttg ttggtaaaga gggcgctga tgggctctgg
 120
 ggaatggagg atggcgacc ggctgtgggt ggactgtgga aacggggggg ggcagtgccg
 180
 gggtagttgt cctgctggtc tggttttggg atcctgggct ggagaaatgc gatccaaaag
 240
 agctcgggat gggctcagag cgaccacga aaataccagg ggccaagtaa aatgaaccca
 300
 ccctttaaca gtgcacaaag cgctggcaca cgggccacgt ctggtgacgc aggctgcccc
 360
 aagcgctcca accattttgc aaacctggga gagcaagagg ggctctgcag gtctagccgc
 420
 cgccctgtc ccactctggc cagccggagt tttcaccta cagaccaata ggaaagaaca
 480
 cgggccccaa actggatttt atagtctgag ctctcagcat ctaaggaatg atatgccc
 538

<210> 328

<211> 125

<212> PRT

<213> Homo sapiens

<400> 328

Met	Val	Gly	Ala	Leu	Arg	Ala	Ala	Cys	Val	Thr	Arg	Arg	Gly	Pro	Cys
1				5					10					15	
Ala	Ser	Ala	Leu	Cys	Thr	Val	Lys	Gly	Trp	Val	His	Phe	Thr	Trp	Pro
			20					25					30		
Leu	Val	Phe	Ser	Trp	Val	Ala	Leu	Ser	Pro	Ser	Arg	Ala	Leu	Leu	Asp
		35					40					45			
Arg	Ile	Ser	Pro	Ala	Gln	Asp	Pro	Lys	Thr	Arg	Pro	Ala	Gly	Gln	Leu
	50					55					60				
Pro	Arg	His	Cys	His	Pro	Pro	Phe	Pro	Gln	Ser	Thr	His	Ser	Arg	Cys
	65				70				75					80	
Ala	Ile	Leu	His	Ser	Pro	Glu	Pro	Ile	Thr	His	Pro	Leu	Tyr	Gln	Gln
			85						90					95	
Thr	Thr	Gly	Arg	Phe	Ser	Pro	Ser	Arg	Ser	Phe	Ser	Pro	Asp	Arg	Pro
			100					105					110		
Ile	Gly	Lys	Asn	Thr	Gly	Pro	Lys	Leu	Asp	Phe	Ile	Val			
		115					120					125			

<210> 329

<211> 407

<212> DNA

<213> Homo sapiens

<400> 329

tccggagagt tccctcccca ggaattcctt ctaagaatcc atgtggaaat agagcctgaa
 60
 gctcttcagt ctttctgctc cactgagcag tgttttcctg atacccttgg taccctgcca
 120
 gcagcctcgt tatgactcct aactccattg cctccatgg ccctggggcg ctctctctct
 180
 ctttctctcc aggtagtaga gcactgcttc tggtctcttg tgcacagaag ggtttccac
 240

agctgagagc tgggctccta ctgacatagt tatttccttt atatcctgcc ccaccttctt
 300
 ctggtagcac acagcaacct tgcatagttag ctggtatcat taccttccca atcaacaggc
 360
 cttgatttct tataggactt tttctctcag atttacattg cttcttt
 407

<210> 330
 <211> 113
 <212> PRT
 <213> Homo sapiens

<400> 330
 Met Ile Pro Ala Thr Met Gln Gly Cys Cys Val Leu Pro Glu Glu Gly
 1 5 10 15
 Gly Ala Gly Tyr Lys Gly Asn Asn Tyr Val Ser Arg Ser Pro Ala Leu
 20 25 30
 Ser Cys Gly Lys Pro Phe Cys Ala Gln Glu Ala Arg Ser Ser Ala Leu
 35 40 45
 Leu Pro Gly Glu Lys Glu Arg Glu Ser Ala Gln Gly Pro Trp Arg Ala
 50 55 60
 Met Glu Leu Gly Val Ile Thr Arg Leu Leu Ala Gly Tyr Gln Gly Tyr
 65 70 75 80
 Gln Glu Asn Thr Ala Gln Trp Ser Arg Lys Thr Glu Glu Leu Gln Ala
 85 90 95
 Leu Phe Pro His Gly Phe Leu Glu Gly Ile Pro Gly Glu Gly Thr Leu
 100 105 110
 Arg

<210> 331
 <211> 523
 <212> DNA
 <213> Homo sapiens

<400> 331
 tgtaccgaac ctgctggtct cgagggcctt gctgggctcg tcgtacgcac agctgacgaa
 60
 tccaccggcc cccatcccg cgccactttc gctgaggcca tggagtcgat cggagccagc
 120
 tacgacggat cggccgggtt ggccggaagt cagtcggcg tcgatgtgcc cgtgacaagg
 180
 ttcgacgcag cggtgaact cttcgtcgaa ttgttgaaca ccacgagcct gggtgaagag
 240
 gacatgccc gtcagatcga cggggcgca gctccctgg cccagaccag ccagcgcgga
 300
 tcggccctag ccgagatggc agcagcacgt gcgctatggc cagtggggtc acggctcgtcc
 360
 ctgcccacga tcggtaccct ctgctcgggt gaaaagctca acgccgcagc cgcacgagaa
 420
 ttctgggccc cgcactggac gatctccgat gccgtgctgg tggttgccgg agagggagtc
 480
 gaggacctcg acttgtcaat attcaaggag tggacgacca gct
 523

<210> 332
 <211> 174
 <212> PRT
 <213> Homo sapiens

<400> 332
 Cys Thr Glu Pro Ala Gly Leu Glu Gly Leu Ala Gly Leu Val Val Arg
 1 5 10 15
 Thr Ala Asp Glu Ser Thr Gly Pro His Pro Gly Ala Thr Phe Ala Glu
 20 25 30
 Ala Met Glu Ser Ile Gly Ala Ser Tyr Asp Gly Ser Ala Gly Leu Ala
 35 40 45
 Gly Ser His Val Gly Val Asp Val Pro Val Thr Arg Phe Asp Ala Ala
 50 55 60
 Ala Glu Leu Phe Val Glu Leu Leu Asn Thr Thr Ser Leu Val Glu Glu
 65 70 75 80
 Asp Ile Ala Arg Gln Ile Asp Ala Ala Arg Ala Ser Leu Ala Gln Thr
 85 90 95
 Ser Gln Arg Gly Ser Ala Leu Ala Glu Met Ala Ala Ala Arg Ala Leu
 100 105 110
 Trp Pro Val Gly Ser Arg Ser Ser Leu Pro Thr Ile Gly Thr Leu Ser
 115 120 125
 Ser Val Glu Lys Leu Asn Ala Ala Ala Ala Arg Glu Phe Trp Ala Ala
 130 135 140
 His Trp Thr Ile Ser Asp Ala Val Leu Val Val Ala Gly Glu Gly Val
 145 150 155 160
 Glu Asp Leu Asp Leu Ser Ile Phe Lys Glu Trp Thr Thr Ser
 165 170

<210> 333
 <211> 372
 <212> DNA
 <213> Homo sapiens

<400> 333
 nntgttcgctc gtgtcgaccc ggaactcaag gcccgaggcga tgacgggtgaa ggtgccaacc
 60
 gatccccatc accgccccggg agttccattg aagtctgcga aggaccgtat ggacatcatt
 120
 tctgcttacc gagaactcgg aagctatcgc gccgcagccg aggtgtgcgg caccacccac
 180
 aagaccgtca agcgggtggt cgatcggttt gaagccggcg atccacccac cggtggcaag
 240
 gaacggggccc gcaactacga tgcggtggcc cagctcgtcg cgcagcgagt cgcgcgggtca
 300
 caccggccgga tcaactgcaa acggctgcta ccggtagcgc gagcggcagg atatgagggg
 360
 tcggcgcgga at
 372

<210> 334
 <211> 88
 <212> PRT

<213> Homo sapiens

<400> 334

```

Met Asp Ile Ile Ser Ala Tyr Arg Glu Leu Gly Ser Tyr Arg Ala Ala
 1      5      10      15
Ala Glu Val Cys Gly Thr Thr His Lys Thr Val Lys Arg Val Val Asp
      20      25      30
Arg Phe Glu Ala Gly Asp Pro Pro Thr Gly Gly Lys Glu Arg Ala Arg
      35      40      45
Asn Tyr Asp Ala Val Ala Gln Leu Val Ala Gln Arg Val Ala Arg Ser
      50      55      60
His Gly Arg Ile Thr Ala Lys Arg Leu Leu Pro Val Ala Arg Ala Ala
65      70      75      80
Gly Tyr Glu Gly Ser Ala Arg Asn
      85

```

<210> 335

<211> 356

<212> DNA

<213> Homo sapiens

<400> 335

```

gtgcacgcct tgctgggcca gggcgatgcg cctgcgcgca cttcgtgga cggtaacctt
60
ggcaggggag ggcattcgcg gctcatcctg cagcgggttg ggccgcaagg cgcctcgggtg
120
gcgttcgaca aggacaccga agccattcaa gcagcggcgc gcatcacgga tgcgcgcttt
180
tccatcnggc accaggggtt cagccatctc ggggaactgc ccgccgccag cgtgtccggt
240
gtgctgctgg acctgggctg gagctccccg cagatcgacg acccccagcg cgggttcagt
300
tttcgtttcg atggtccgct ggacatgcgc atggacacca ctccgatgca tggatg
356

```

<210> 336

<211> 118

<212> PRT

<213> Homo sapiens

<400> 336

```

Val His Ala Leu Leu Gly Glu Gly Asp Ala Pro Ala Arg Thr Phe Val
 1      5      10      15
Asp Gly Thr Phe Gly Arg Gly Gly His Ser Arg Leu Ile Leu Gln Arg
      20      25      30
Leu Gly Pro Gln Gly Arg Leu Val Ala Phe Asp Lys Asp Thr Glu Ala
      35      40      45
Ile Gln Ala Ala Ala Arg Ile Thr Asp Ala Arg Phe Ser Ile Xaa His
      50      55      60
Gln Gly Phe Ser His Leu Gly Glu Leu Pro Ala Ala Ser Val Ser Gly
65      70      75      80
Val Leu Leu Asp Leu Gly Val Ser Ser Pro Gln Ile Asp Asp Pro Gln
      85      90      95
Arg Gly Phe Ser Phe Arg Phe Asp Gly Pro Leu Asp Met Arg Met Asp

```

100
Thr Thr Pro Met His Gly
115

105

110

<210> 337
<211> 447
<212> DNA
<213> Homo sapiens

<400> 337
cagcctctct cgcaccgcgc cgggtgtgaag caggggcatg ccgggtgtgca agtggcacca
60
cagccaaaac agcgagctca cacttcaaac tccttcaaag accccaggcc tctgtaagaa
120
ccgctcatct ctgtgcccac agctcccccg cttccatgtg acccagaaat ggaaccacgc
180
agcagaggcg gggatcacag gtgaagcagc tgtgaacatt tgcttcaggc ttctgtgcaa
240
acaggcgcca tcatgtcagc cgggtgagcag gagcaacgtg cgtgggtcag ggggtggcca
300
cacgtccaac ttataagaa atgacagatt ccctgatggc catagggatc tgcagggcca
360
gcagcaggca taggacttcc ggtggccctg cgtcttcacg aacactgagt attgtcaggg
420
tttctgtact gtttttacag ccaattg
447

<210> 338
<211> 111
<212> PRT
<213> Homo sapiens

<400> 338
Met Pro Val Cys Lys Trp His His Ser Gln Asn Ser Glu Leu Thr Leu
1 5 10 15
Gln Thr Pro Ser Lys Thr Pro Gly Leu Cys Lys Asn Arg Ser Ser Leu
20 25 30
Cys Pro Gln Leu Pro Arg Phe His Val Thr Gln Lys Trp Asn His Ala
35 40 45
Ala Glu Ala Gly Ile Thr Gly Glu Ala Ala Val Asn Ile Cys Phe Arg
50 55 60
Leu Leu Cys Lys Gln Ala Pro Ser Cys Gln Pro Val Ser Arg Ser Asn
65 70 75 80
Val Arg Gly Ser Gly Gly Gly His Thr Ser Asn Phe Ile Arg Asn Asp
85 90 95
Arg Phe Pro Asp Gly His Arg Asp Leu Gln Gly Gln Gln Ala
100 105 110

<210> 339
<211> 588
<212> DNA
<213> Homo sapiens

<400> 339

tctagaatga agcgctgtat cctagcaccg gcagacgtac caagactatc aagggcggtca
 60
 gatcgtttat cctgcagttg ccattcatca gacaaatcca gtggaacca atggaagaca
 120
 ccgacctgca agcgctgatg gccagactcg aattgctaata tgatcgggtc gagcaactta
 180
 agagtcaaaa cggactccta ttagctcagg aaaagacctg ggcgcganaa cgcgctcacc
 240
 tcattgaaaa aaacgaaatc gcccggcgta aggtcgaatc gatgatttcg cgcctgaagg
 300
 ccctggagca agactatgag ttaagcaata gcgttacgtg cagatcctcg acaaagaata
 360
 ttgatcatc tgcccccagg aagaacgcag cacctggtga gtgctgccg ctacctggaa
 420
 ggccaaaagg cgtgaaatcc gcagcagcgg caaagtcac ggtgccgacc gcacgcgcgt
 480
 gatggccgcg ctgaacatca cccacgatct gctgcataag caggaacggc ctgacgttca
 540
 ggccagcggc tcaacgcgcg agcaagtgcg tgacctgctg gaacgcgt
 588

<210> 340
 <211> 123
 <212> PRT
 <213> Homo sapiens

<400> 340
 Met Glu Asp Thr Asp Leu Gln Ala Leu Met Ala Arg Leu Glu Leu Leu
 1 5 10 15
 Ile Asp Arg Val Glu Gln Leu Lys Ser Gln Asn Gly Leu Leu Leu Ala
 20 25 30
 Gln Glu Lys Thr Trp Ala Arg Xaa Arg Ala His Leu Ile Glu Lys Asn
 35 40 45
 Glu Ile Ala Arg Arg Lys Val Glu Ser Met Ile Ser Arg Leu Lys Ala
 50 55 60
 Leu Glu Gln Asp Tyr Glu Leu Ser Asn Ser Val Thr Cys Arg Ser Ser
 65 70 75 80
 Thr Lys Asn Ile Arg Ser Ser Ala Pro Arg Lys Asn Ala Ala Pro Gly
 85 90 95
 Glu Cys Cys Pro Leu Pro Gly Arg Pro Lys Gly Val Lys Ser Ala Ala
 100 105 110
 Ala Ala Lys Ser Ser Val Pro Thr Ala Ser Pro
 115 120

<210> 341
 <211> 401
 <212> DNA
 <213> Homo sapiens

<400> 341
 ngccgcgcgg cctacctgct gtacctggcc tatgccacct ggcgtgaccg ctcggccttt
 60
 gcaatgaacg acacgccgac agttgcgacc gcgcgcagcc tgatcctgcg tggcttcttg
 120

ctgaacattc ttaaccccaa gctgacaatt ttcttcctgg ccttcctgcc tcaattcgta
 180
 acgccaggcg gcaccgcgcc ggccttgacg atgctggtag tgagcggcgt gttcatggcg
 240
 atgacgcttg cagtgtttgt gctgtatggc ctgttggcga atgtgtttcg tcgtgcagtg
 300
 gtcgagtcgc cacgtgtgca gaactggctg cgacgcagtt ttgccacggc ctttgccggg
 360
 ctgggggttg acctggcggt tgcgcgagcg tgaggacgcg t
 401

<210> 342

<211> 130

<212> PRT

<213> Homo sapiens

<400> 342

Xaa	Arg	Ala	Ala	Tyr	Leu	Leu	Tyr	Leu	Ala	Tyr	Ala	Thr	Trp	Arg	Asp
1				5				10						15	
Arg	Ser	Ala	Phe	Ala	Met	Asn	Asp	Thr	Pro	Thr	Val	Ala	Thr	Ala	Arg
		20						25					30		
Ser	Leu	Ile	Leu	Arg	Gly	Phe	Leu	Asn	Ile	Leu	Asn	Pro	Lys	Leu	
		35				40				45					
Thr	Ile	Phe	Phe	Leu	Ala	Phe	Leu	Pro	Gln	Phe	Val	Thr	Pro	Gly	Gly
	50					55				60					
Thr	Ala	Pro	Ala	Leu	Gln	Met	Leu	Val	Leu	Ser	Gly	Val	Phe	Met	Ala
65					70					75				80	
Met	Thr	Leu	Ala	Val	Phe	Val	Leu	Tyr	Gly	Leu	Leu	Ala	Asn	Val	Phe
			85						90					95	
Arg	Arg	Ala	Val	Glu	Ser	Pro	Arg	Val	Gln	Asn	Trp	Leu	Arg	Arg	
			100					105				110			
Ser	Phe	Ala	Thr	Ala	Phe	Ala	Gly	Leu	Gly	Leu	Asn	Leu	Ala	Phe	Ala
		115					120					125			
Gln	Arg														
	130														

<210> 343

<211> 389

<212> DNA

<213> Homo sapiens

<400> 343

gtgttgcgca actacatggc gtccttgccg ttcagcgtgg tcgagtcggc gcgcacgcac
 60
 ggggtgctcca acttcagat cttctggaag ctgatcgccc cgatggcgat gccggcgatg
 120
 gcggcggttcg cgaccctgca gttcctgtgg gtgtggaacg acctgctcat cgccaagctc
 180
 ttctcacca acgacaaccc cacggtgatc gtcaagctcc aacagctttc cnnngggcccc
 240
 aaggcccagg gtgcggagct gctgacggcg ggcgccttca tctccatcgt gctacccatg
 300
 atcgtcttct tcgtgctcca gaacttcctg gtgcgcggta tgacgtcggg tgccgtcaag
 360

gggtgaccgc tcaactgcag tggcccggg
389

<210> 344
<211> 121
<212> PRT
<213> Homo sapiens

<400> 344
Val Leu Arg Asn Tyr Met Ala Ser Leu Pro Phe Ser Val Val Glu Ser
1 5 10 15
Ala Arg Ile Asp Gly Cys Ser Asn Phe Gln Ile Phe Trp Lys Leu Ile
20 25 30
Ala Pro Met Ala Met Pro Ala Met Ala Ala Phe Ala Thr Leu Gln Phe
35 40 45
Leu Trp Val Trp Asn Asp Leu Leu Ile Ala Lys Leu Phe Leu Thr Asn
50 55 60
Asp Asn Pro Thr Val Ile Val Lys Leu Gln Gln Leu Ser Xaa Gly Pro
65 70 75 80
Lys Ala Gln Gly Ala Glu Leu Leu Thr Ala Gly Ala Phe Ile Ser Ile
85 90 95
Val Leu Pro Met Ile Val Phe Phe Val Leu Gln Asn Phe Leu Val Arg
100 105 110
Gly Met Thr Ser Gly Ala Val Lys Gly
115 120

<210> 345
<211> 360
<212> DNA
<213> Homo sapiens

<400> 345
ctagtacttt atgctgatgg tgaacgtcgt tacatccttg cccctaaagg catggttgct
60
ggtgatgtga tccaatctgg tgaagatgca tcaattaaag taggtaactg cttaccgatg
120
cgtaatatcc cagttggtac aacagtacac gctgtagaaa tgaaacctgc taaaggtgca
180
caaattgcac gttctgctgg ttcttacagc caaattatag ctgctgatgg tgcttacggt
240
actctacggt tacgtagtgg tgaaatgcgt aaaatccctg ctgagtgtcg tgcaacaatc
300
ggtgaagttg gtaatgcaga acatattgcta cgtcaactag gtaaagctgg tgctacgcgt
360

<210> 346
<211> 120
<212> PRT
<213> Homo sapiens

<400> 346
Leu Val Leu Tyr Ala Asp Gly Glu Arg Arg Tyr Ile Leu Ala Pro Lys
1 5 10 15
Gly Met Val Ala Gly Asp Val Ile Gln Ser Gly Glu Asp Ala Ser Ile

```

      20      25      30
Lys Val Gly Asn Cys Leu Pro Met Arg Asn Ile Pro Val Gly Thr Thr
      35      40      45
Val His Ala Val Glu Met Lys Pro Ala Lys Gly Ala Gln Ile Ala Arg
      50      55      60
Ser Ala Gly Ser Tyr Ser Gln Ile Ile Ala Arg Asp Gly Ala Tyr Val
65      70      75      80
Thr Leu Arg Leu Arg Ser Gly Glu Met Arg Lys Ile Pro Ala Glu Cys
      85      90      95
Arg Ala Thr Ile Gly Glu Val Gly Asn Ala Glu His Met Leu Arg Gln
      100      105      110
Leu Gly Lys Ala Gly Ala Thr Arg
      115      120

```

<210> 347
 <211> 565
 <212> DNA
 <213> Homo sapiens

```

<400> 347
accggtgatg ccaaaggtgc tgtgacaagg ggattcatcg gttcgggcaa ggtcgtcacg
60
gcagctgccg tcatcatgat ttcggtgttc gtcttcttca tccccgaggg catgaacgcc
120
atcaaggaaa tcgccctggc cctggccgtc gggatcctca cggatgcctt cttggtgcgg
180
atgaccctcg tccccgccgt gatggccctg ctaggtgaca aggcattggtg gttgccccgg
240
tggctggatc gacgcctacc ccgcctcgac atcgagggag aagggatcac ccacgaggaa
300
aagctggccg cctggccca cagcgatcac accgaggccc tgcacgccga ggggatcggg
360
gtggaggggc tcttcaagg cctcgatctg cacgtcgaac cgcgtcaggt gcaagccgtc
420
gtcggatcgc agaacagtgt ctggccgtc ctgctggcga tggggggacg gctgcccttg
480
gatcacggcc ggatgaggtc gggaggattg ctgctaccgc agcgggcttc cagagtgcgt
540
cgggtgacgt gggtcctcga cgcgt
565

```

<210> 348
 <211> 188
 <212> PRT
 <213> Homo sapiens

```

<400> 348
Thr Gly Asp Ala Lys Gly Ala Val Thr Arg Gly Phe Ile Gly Ser Gly
1      5      10      15
Lys Val Val Thr Ala Ala Ala Val Ile Met Ile Ser Val Phe Val Phe
      20      25      30
Phe Ile Pro Glu Gly Met Asn Ala Ile Lys Glu Ile Ala Leu Ala Leu
      35      40      45
Ala Val Gly Ile Leu Thr Asp Ala Phe Leu Val Arg Met Thr Leu Val

```



```

      50              55              60
Pro Ala Val Met Ala Leu Leu Gly Asp Lys Ala Trp Trp Leu Pro Gly
65              70              75              80
Trp Leu Asp Arg Arg Leu Pro Arg Leu Asp Ile Glu Gly Glu Gly Ile
      85              90              95
Thr His Glu Glu Lys Leu Ala Ala Trp Pro Thr Ala Asp His Thr Glu
      100              105              110
Ala Leu His Ala Glu Gly Ile Gly Val Glu Gly Leu Phe Glu Gly Leu
      115              120              125
Asp Leu His Val Glu Pro Arg Gln Val Gln Ala Val Val Gly Ser Gln
      130              135              140
Asn Ser Val Ser Ala Val Leu Leu Ala Ile Gly Gly Arg Leu Pro Leu
145              150              155              160
Asp His Gly Arg Met Arg Ser Gly Gly Leu Leu Leu Pro Glu Arg Ala
      165              170              175
Ser Arg Val Arg Arg Val Thr Trp Phe Leu Asp Ala
      180              185

```

<210> 349
 <211> 339
 <212> DNA
 <213> Homo sapiens

```

<400> 349
ntgctggcca cggataatga ccgtactctg cgtgatgtcg ttgccgctga ccctacccat
60
gagctcggtt cggctaccgc tcatacgttt gcggacaatt tgccgttcct tcttaaactg
120
ctcgcggcag aagagccact atcgttgacg gtcacatcca gtttggcgca agcacaggaa
180
gggtacgggc gggagaatcg caaaggggtg ccattagatg cccagaccg gaattaccac
240
gatccaacc ataaaccgga gcttattgtt gggctgacgc gattccacgc actagccggc
300
ttcctgaac cacaacgcac acttgagctt tttgacgcg
339

```

<210> 350
 <211> 113
 <212> PRT
 <213> Homo sapiens

```

<400> 350
Xaa Leu Ala Thr Asp Asn Asp Arg Thr Leu Arg Asp Val Val Ala Ala
1      5      10      15
Asp Pro Thr His Glu Leu Gly Ser Ala Thr Ala His Thr Phe Ala Asp
      20      25      30
Asn Leu Pro Phe Leu Leu Lys Leu Leu Ala Ala Glu Glu Pro Leu Ser
      35      40      45
Leu Gln Ala His Pro Ser Leu Ala Gln Ala Gln Glu Gly Tyr Gly Arg
      50      55      60
Glu Asn Arg Lys Gly Val Pro Leu Asp Ala Pro Asp Arg Asn Tyr His
65      70      75      80
Asp Pro Asn His Lys Pro Glu Leu Ile Val Gly Leu Thr Arg Phe His

```

85 90 95
 Ala Leu Ala Gly Phe Arg Glu Pro Gln Arg Thr Leu Glu Leu Phe Asp
 100 105 110
 Ala

<210> 351
 <211> 354
 <212> DNA
 <213> Homo sapiens

<400> 351
 gcgcgcccc gtgccgagac ccggggcttc aggagccggc cccgggagag aagagtgcgg
 60
 cggcggaacgg agaaaacaac tccaaagttg gcgaaaggca ccgcccctac tcccgggctg
 120
 ccgcgcctc cccgccccca gccctggcat ccagagtacg ggtcgagccc gnggccatgg
 180
 agccccctg gggaggcggc accagggagc ctgggccccg gggctccgcc gcgaccccat
 240
 cgggtagacc acagaagctc cgggaccctt ccggcacctc tggacagccc aggatgctgt
 300
 tggccaccn ntctctctcc tctccttgg aggcgctctg gcccatccag accg
 354

<210> 352
 <211> 118
 <212> PRT
 <213> Homo sapiens

<400> 352
 Ala Arg Pro Ser Ala Glu Thr Arg Gly Phe Arg Ser Arg Pro Arg Glu
 1 5 10 15
 Arg Arg Val Arg Arg Arg Thr Glu Lys Thr Thr Pro Lys Leu Ala Lys
 20 25 30
 Gly Thr Ala Pro Thr Pro Gly Leu Pro Pro Pro Arg Pro Gln Pro
 35 40 45
 Trp His Pro Glu Tyr Gly Ser Ser Pro Xaa Pro Trp Ser Pro Pro Gly
 50 55 60
 Glu Ala Ala Pro Gly Ser Leu Gly Pro Gly Ala Pro Pro Arg Pro His
 65 70 75 80
 Arg Val Asp His Arg Ser Ser Gly Thr Leu Pro Ala Pro Leu Asp Ser
 85 90 95
 Pro Gly Cys Cys Trp Pro Pro Xaa Pro Pro Pro Pro Trp Arg Arg
 100 105 110
 Ser Gly Pro Ser Arg Pro
 115

<210> 353
 <211> 1469
 <212> DNA
 <213> Homo sapiens

<400> 353

nntcatgaag gcttgaactt gcgtgatctt cagcctgcgg acctggcggg tgacggcggt
60
attgagccgg tggacctcgt ggtcggagat gtctctttta tctccttgac gatgatcctt
120
gaaccattt cagctgttgt cagcccacac ggcctcatgc tgttgctggg gaagcctcaa
180
tttgagggtt gttgcaaggc tttgggagcc catggcggtt tcacggaccc ggccctgcgc
240
ttgcaggcca tcgcgggtgt catggcagca gcggttagatt tgggttggcg tatgcgtgac
300
gagtgcgata gcccgttgcc cgggcaggat ggaaacgttg agcacttcgt cttgctggaa
360
cgtacgggtc ggtgacagac gtccgggcat atcatgggccc gctactgtgg tcttgtgaac
420
gacacgagcc cttcgagata cgttgctcgc gtcacccatg ccacgcggga cgacgctttt
480
gacgcggctg ccgaattcat ctctgaaatg gcggggcgag acattgggtt gcgcgttccg
540
gatgatcagg tgaagccgat gtcaagcaag ctgccaggga tcgatcttga aagcttggga
600
gagttcggcc acgaggcgga ggtggtcgc gtctttggcg gcgacggcac gatcttgcga
660
gctgtgaat ggtcattacc tcgccacgtt cccatgattg gcgtcaacct tggccatgtc
720
ggttttcttg ctgagctgga gcgctccgat atggcggatc tagtgaacaa ggtgtgttcg
780
cgcgactaca ccgttgagga tcgcctcgtg cttaaaacca ccgtcaccga gcattccgga
840
caacaccgtt ggagttcttt tgccgtcaac gagttgtctc tggaaaaggc agcccgccgg
900
cgcgtgctcg acgttctggc gtctgtcgac gagttgccgg tgcaacgctg gagttgcgac
960
gggatccttg tctcgacccc gaccggatcg acggcctacg cgttctcagc tggcggcccc
1020
gtcatgtggc ccgatctcga cccatgctc atggtgccgt tgagcgetca cgctctcttt
1080
gctcgaccgc tggatcatgag cccagctgct cgagtggacc ttgacatcca gccagacggg
1140
tcagaatcgg cggttctgtg gtgcgacggg cgcgcgatcg gcaccgtacg accgggggaa
1200
agaatcaccg tcgtccgcca tcccgaaccg ctgcgcattg ctgctctggc cgcgcagccc
1260
ttcacatcgc gtctggtcaa gaagtttgag ctcccgggtc gcgggtggcg tcagggtcgt
1320
gaccgtcatc acctagagga gacttcgtga tacgtagtgt gcgaattcgt ggactcggcg
1380
tcatcgtga gacggctctc gaacctcat ccgcgtgac ggcagtcacc ggcgagaccg
1440
gcgccggaaa gaccatggtg gtcaccggt
1469

<210> 354

<211> 318

<212> PRT

<213> Homo sapiens

<400> 354

```

Met Gly Arg Tyr Cys Gly Leu Val Asn Asp Thr Ser Pro Ser Arg Tyr
 1          5          10          15
Val Val Val Val Thr His Ala Thr Arg Asp Asp Ala Phe Asp Ala Ala
 20          25          30
Ala Glu Phe Ile Ser Glu Met Ala Gly Arg Asp Ile Gly Cys Ala Val
 35          40          45
Pro Asp Asp Gln Val Lys Pro Met Ser Ser Lys Leu Pro Gly Ile Asp
 50          55          60
Leu Glu Ser Leu Gly Glu Phe Ala His Glu Ala Glu Val Val Val Val
 65          70          75          80
Phe Gly Gly Asp Gly Thr Ile Leu Arg Ala Ala Glu Trp Ser Leu Pro
 85          90          95
Arg His Val Pro Met Ile Gly Val Asn Leu Gly His Val Gly Phe Leu
100          105          110
Ala Glu Leu Glu Arg Ser Asp Met Ala Asp Leu Val Asn Lys Val Cys
115          120          125
Ser Arg Asp Tyr Thr Val Glu Asp Arg Leu Val Leu Lys Thr Thr Val
130          135          140
Thr Glu His Ser Gly Gln His Arg Trp Ser Ser Phe Ala Val Asn Glu
145          150          155          160
Leu Ser Leu Glu Lys Ala Ala Arg Arg Arg Met Leu Asp Val Leu Ala
165          170          175
Ser Val Asp Glu Leu Pro Val Gln Arg Trp Ser Cys Asp Gly Ile Leu
180          185          190
Val Ser Thr Pro Thr Gly Ser Thr Ala Tyr Ala Phe Ser Ala Gly Gly
195          200          205
Pro Val Met Trp Pro Asp Leu Asp Ala Met Leu Met Val Pro Leu Ser
210          215          220
Ala His Ala Leu Phe Ala Arg Pro Leu Val Met Ser Pro Ala Ala Arg
225          230          235          240
Val Asp Leu Asp Ile Gln Pro Asp Gly Ser Glu Ser Ala Val Leu Trp
245          250          255
Cys Asp Gly Arg Arg Ser Cys Thr Val Arg Pro Gly Glu Arg Ile Thr
260          265          270
Val Val Arg His Pro Asp Arg Leu Arg Ile Ala Arg Leu Ala Ala Gln
275          280          285
Pro Phe Thr Ser Arg Leu Val Lys Lys Phe Glu Leu Pro Val Ser Gly
290          295          300
Trp Arg Gln Gly Arg Asp Arg His His Leu Glu Glu Thr Ser
305          310          315

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<210> 355

<211> 558

<212> DNA

<213> Homo sapiens

<400> 355

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nggateccac ctcttggaaat ggaaacccac ataccagttc tcttctctga tttgaatgcg
60
gatgacctca gtgccaatga gcagcttggt ggcccccatg catccggcgt gaactccatc
120

```

ctgcccgaagg agcatggcag ccagtttttc tacctgcccc tcataaagca cagtgatgat
 180
 gaggtttcag ccacagcctc ttgggattcc tcggtgcatg attctgttca cttgaatggg
 240
 gtcacaccac agaatgaaag gatttaccta attgtgaaaa ccacagttca actcagccac
 300
 cctgctgcta tggagttagt attacgaaaa cgaattgcag ccaatattta caacaaacag
 360
 agtttcacgc agagtttgaa gaggagaata tccttgaaaa atatatttta ttctgtggt
 420
 gtaacctatg aaatagtatc caatatacca aaggcaactg aggagataga ggaccgggaa
 480
 acgctggctc tcctggcagc aaggagtga aacgaaggca catcagatgg gaagacgtac
 540
 attgagaagt aactcga
 558

<210> 356

<211> 186

<212> PRT

<213> Homo sapiens

<400> 356

Xaa	Ile	Pro	Pro	Pro	Gly	Met	Glu	Thr	His	Ile	Pro	Val	Leu	Phe	Leu
1			5						10					15	
Asp	Leu	Asn	Ala	Asp	Asp	Leu	Ser	Ala	Asn	Glu	Gln	Leu	Val	Gly	Pro
		20						25				30			
His	Ala	Ser	Gly	Val	Asn	Ser	Ile	Leu	Pro	Lys	Glu	His	Gly	Ser	Gln
	35					40					45				
Phe	Phe	Tyr	Leu	Pro	Ile	Ile	Lys	His	Ser	Asp	Asp	Glu	Val	Ser	Ala
	50					55				60					
Thr	Ala	Ser	Trp	Asp	Ser	Ser	Val	His	Asp	Ser	Val	His	Leu	Asn	Gly
65				70					75					80	
Val	Thr	Pro	Gln	Asn	Glu	Arg	Ile	Tyr	Leu	Ile	Val	Lys	Thr	Thr	Val
			85					90						95	
Gln	Leu	Ser	His	Pro	Ala	Ala	Met	Glu	Leu	Val	Leu	Arg	Lys	Arg	Ile
			100					105				110			
Ala	Ala	Asn	Ile	Tyr	Asn	Lys	Gln	Ser	Phe	Thr	Gln	Ser	Leu	Lys	Arg
		115				120					125				
Arg	Ile	Ser	Leu	Lys	Asn	Ile	Phe	Tyr	Ser	Cys	Gly	Val	Thr	Tyr	Glu
	130				135					140					
Ile	Val	Ser	Asn	Ile	Pro	Lys	Ala	Thr	Glu	Glu	Ile	Glu	Asp	Arg	Glu
145				150					155					160	
Thr	Leu	Ala	Leu	Leu	Ala	Ala	Arg	Ser	Glu	Asn	Glu	Gly	Thr	Ser	Asp
			165					170						175	
Gly	Lys	Thr	Tyr	Ile	Glu	Lys	Tyr	Thr	Arg						
			180					185							

<210> 357

<211> 323

<212> DNA

<213> Homo sapiens

<400> 357

acgcgtgcgt gtgttggtgt agtcgggtgt gtgcatgcgt gtgggtgtgc agcaggtggg
 60
 gtacgatcag gctgaaggct gatcaggcac aaggctctgg gggagagccc tggttccagc
 120
 cctgggggtca gagcagcagg ggccagaaag acggcagggg tgagcactgc acccgctggg
 180
 cagggcaggg ccacagaagg cagggcatgg aggccacgtg aagggttga cagagtggat
 240
 ggatgtctcc ggaagcacct gcgtggccca gtcagcagga tcagactcgc atgtgtcagg
 300
 gtcacatgg gtcagcgagg atn
 323

<210> 358
 <211> 102
 <212> PRT
 <213> Homo sapiens

<400> 358
 Met Val Thr Leu Thr His Ala Ser Leu Ile Leu Leu Thr Gly Pro Arg
 1 5 10 15
 Arg Cys Phe Arg Arg His Pro Ser Thr Leu Ser Ser Pro Ser Arg Gly
 20 25 30
 Leu His Ala Leu Pro Ser Val Ala Leu Pro Cys Pro Ala Gly Ala Val
 35 40 45
 Leu Thr Pro Ala Val Phe Leu Ala Pro Ala Ala Leu Thr Pro Gly Leu
 50 55 60
 Glu Pro Gly Leu Ser Pro Arg Ala Leu Cys Leu Ile Ser Leu Gln Pro
 65 70 75 80
 Asp Arg Thr Pro Pro Ala Ala His Pro His Ala Cys Thr His Pro Thr
 85 90 95
 His Thr Thr His Ala Arg
 100

<210> 359
 <211> 265
 <212> DNA
 <213> Homo sapiens

<400> 359
 acgcgtaccg acaagcgcgc ggtgatggcc gaccttcgcg aatcgggcgc aatcgagcag
 60
 gatgcggaca tgatcgtctt catctaccgc gacgattact acaacaagga aaattcgccg
 120
 gacaaggggc tggccgagat catcatcggc aagcatcggg ggggccccac cggctcgtgc
 180
 aagctgaagt tcttcggcga gtacaccgt ttcgacaace tggcccacaa ctcggttggg
 240
 tcgttcgaat aacggatgat tccgg
 265

<210> 360
 <211> 83
 <212> PRT

<213> Homo sapiens

<400> 360

```

Thr Arg Thr Asp Lys Arg Pro Val Met Ala Asp Leu Arg Glu Ser Gly
 1           5           10           15
Ala Ile Glu Gln Asp Ala Asp Met Ile Val Phe Ile Tyr Arg Asp Asp
      20           25           30
Tyr Tyr Asn Lys Glu Asn Ser Pro Asp Lys Gly Leu Ala Glu Ile Ile
      35           40           45
Ile Gly Lys His Arg Gly Gly Pro Thr Gly Ser Cys Lys Leu Lys Phe
      50           55           60
Phe Gly Glu Tyr Thr Arg Phe Asp Asn Leu Ala His Asn Ser Val Gly
65           70           75           80
Ser Phe Glu

```

<210> 361

<211> 453

<212> DNA

<213> Homo sapiens

<400> 361

```

gctttgcagg aggaaatctc tatctctggc tgcaagatga ggctgagcta cctgagcagc
60
cggacccctg gctacaaatc tgtcctgagg atcagcctca cccacccgac catcccttc
120
aacctcatga aggtgcacct catggtagcg gtggagggcc gcctcttcag gaagtggttc
180
gctgcagccc cagacctgtc ctattatttc atttgggaca agacagacgt ctacaaccag
240
aaggtgtttg ggctttcaga agcctttggt tccgtggggt atgaatatga atcctgcccc
300
gatctaattc tgtgggaaaa aagaacaaca gtgctgcagg gctatgaaat tgacgcgtcc
360
aagcttgagg gatggagcct agacaaacat catgccctca acattcaaag tggcatcctg
420
cacaagggga atgngagaa ccagtttgtg tct
453

```

<210> 362

<211> 151

<212> PRT

<213> Homo sapiens

<400> 362

```

Ala Leu Gln Glu Glu Ile Ser Ile Ser Gly Cys Lys Met Arg Leu Ser
 1           5           10           15
Tyr Leu Ser Ser Arg Thr Pro Gly Tyr Lys Ser Val Leu Arg Ile Ser
      20           25           30
Leu Thr His Pro Thr Ile Pro Phe Asn Leu Met Lys Val His Leu Met
      35           40           45
Val Ala Val Glu Gly Arg Leu Phe Arg Lys Trp Phe Ala Ala Ala Pro
      50           55           60
Asp Leu Ser Tyr Tyr Phe Ile Trp Asp Lys Thr Asp Val Tyr Asn Gln

```

```

65          70          75          80
Lys Val Phe Gly Leu Ser Glu Ala Phe Val Ser Val Gly Tyr Glu Tyr
          85          90          95
Glu Ser Cys Pro Asp Leu Ile Leu Trp Glu Lys Arg Thr Thr Val Leu
          100          105          110
Gln Gly Tyr Glu Ile Asp Ala Ser Lys Leu Gly Gly Trp Ser Leu Asp
          115          120          125
Lys His His Ala Leu Asn Ile Gln Ser Gly Ile Leu His Lys Gly Asn
          130          135          140
Gly Glu Asn Gln Phe Val Ser
145          150

```

<210> 363

<211> 502

<212> DNA

<213> Homo sapiens

<400> 363

```

ggtacacaaaa aagtttgcca cagtattcac actccaggtc tccataaacc ttccagatcc
60
gctcacacaa gctgggtgttc atttgcttct tctgtaaact gttcaggacc ttcagaaag
120
cggtagatgcc tgaccgggtgc tcaggggagc ctttgcaaga gtcaggctga tgtgtgatgg
180
tgtccccacc accagctact ggagggagga ggtctgaggc ctgagctggg tttgacctga
240
gacacctgct gggatctggg tcaccagctg aaagcacagc catgttctgc cttcccccta
300
gggggctctg ggcgccatgg ctttctgat ctgaccagc actctgggccc ttggacagca
360
gtagtgtgat cacttcacct tgcgtctgga ctgagcttct gtgctgcatg tctgggggct
420
tctcaggagc agcatgagcc tctgaggagg aggtatcatt tttcaacaaa aaatcatctg
480
aaaccacctc ttgagaatgc ag
502

```

<210> 364

<211> 136

<212> PRT

<213> Homo sapiens

<400> 364

```

Met Gln His Arg Ser Ser Val Gln Thr Gln Gly Glu Val Ile Thr Leu
1          5          10          15
Leu Leu Ser Lys Ala Gln Ser Ala Gly Ser Asp Gln Glu Ser His Gly
          20          25          30
Ala Gln Ser Pro Leu Gly Glu Gly Gln Asn Met Ala Val Leu Ser Ala
          35          40          45
Gly Asp Pro Asp Pro Ser Arg Cys Leu Arg Ser Asn Pro Ala Glu Ala
          50          55          60
Ser Asp Leu Leu Pro Pro Val Ala Gly Gly Gly Asp Thr Ile Thr His
65          70          75          80
Gln Pro Asp Ser Cys Lys Ala Ala Pro Glu His Arg Ser Gly Ile Thr

```


<400> 367

gcgttcgtcg cactaccggg cggcggcgga acccttgacg agctactcga agcatggaca
60
tggcagcagc tcggtgtaca cagcaaaccg gtgngccttg tacgactcga cnncttctgg
120
gcaccgctga ccgcgctact caaccacatg accatcgaaa gcttcattcg ccctgaggac
180
cgcgctctgc tcgtgategc cgataccata catcagctga tggccgatct tgagggatgg
240
accccaccac caccgaagtg gcgctcgtga catagaacaa atgattctga ctatggctca
300
ttgacatctg cgcagcggct actagctcca ttgacttcaa atcgggcctt ggccgaggct
360
cngttcaggt ggcccgaat g
381

<210> 368

<211> 89

<212> PRT

<213> Homo sapiens

<400> 368

Ala	Phe	Val	Ala	Leu	Pro	Gly	Gly	Gly	Gly	Thr	Leu	Asp	Glu	Leu	Leu
1				5				10						15	
Glu	Ala	Trp	Thr	Trp	Gln	Gln	Leu	Gly	Val	His	Ser	Lys	Pro	Val	Xaa
		20					25					30			
Leu	Val	Arg	Leu	Asp	Xaa	Phe	Trp	Ala	Pro	Leu	Thr	Ala	Leu	Leu	Asn
		35				40					45				
His	Met	Thr	Ile	Glu	Ser	Phe	Ile	Arg	Pro	Glu	Asp	Arg	Ala	Ser	Leu
	50					55				60					
Val	Ile	Ala	Asp	Thr	Ile	His	Gln	Leu	Met	Ala	Asp	Leu	Glu	Gly	Trp
65				70					75					80	
Thr	Pro	Pro	Pro	Pro	Lys	Trp	Arg	Ser							
				85											

<210> 369

<211> 313

<212> DNA

<213> Homo sapiens

<400> 369

gatacatgat cctctcatac cgcacacaca ccgctcccct ctgcgcgaat tcgcagacaa
60
acttgcgagc gcttcacagc aagccgtcaa ggctgcttcc tgtgggctac cgatagtctc
120
gtacgcgagt tctcggacat caacgccaac gtcgggcaag atactgtcaa cgccatctac
180
acattctacg agcagcaagc gaccagtttc cttegccagc tgaacgacct cccacccgaa
240
gagcttcccg acgtcatcga ggactttctc cgcctgtcca ctgatgtcct tctttaccat
300
ttccagcaag ctt
313

<210> 370

<211> 101
 <212> PRT
 <213> Homo sapiens

<400> 370
 Ser Ser His Thr Ala His Thr Pro Leu Pro Ser Ala Ala Ile Arg Arg
 1 5 10 15
 Gln Thr Cys Ala Gly Phe Thr Ala Ser Arg Gln Gly Cys Phe Leu Trp
 20 25 30
 Ala Thr Asp Ser Leu Val Arg Glu Phe Ser Asp Ile Asn Ala Asn Val
 35 40 45
 Gly Gln Asp Thr Val Asn Ala Ile Tyr Thr Phe Tyr Glu Gln Gln Ala
 50 55 60
 Thr Ser Phe Leu Arg Gln Leu Asn Asp Leu Pro Pro Glu Glu Leu Pro
 65 70 75 80
 Asp Val Ile Glu Asp Phe Phe Arg Leu Ser Thr Asp Val Leu Leu Tyr
 85 90 95
 His Phe Gln Gln Ala
 100

<210> 371
 <211> 380
 <212> DNA
 <213> Homo sapiens

<400> 371
 atgacggggtc acgtcatcct ggcgattcca caggtgggtga cgatcatggat cggcctcatc
 60
 tgcacgcca ttggcacggg ctttatcaag ccgaacctct ccacggtggg aggaggtctt
 120
 tacgatgaag gtgacccccg ccgcatcag ggtttcctgt acttctacat gtcgatcagt
 180
 attggatctc ttttcgccc gatcgacc ggcctcctca aggaccatta cggctaccac
 240
 gtaggtttca ttgccgtgc tateggtatg gctctgggtc tgatcgctt cttccacggt
 300
 cgttccaaac tgcgtgagct cgccttcgac atccccaatc cgctggcccc cggcgagggt
 360
 cgccggatgg tgctccgagg
 380

<210> 372
 <211> 126
 <212> PRT
 <213> Homo sapiens

<400> 372
 Met Thr Gly His Val Ile Leu Ala Ile Pro Gln Val Val Thr Ser Trp
 1 5 10 15
 Ile Gly Leu Ile Cys Ile Ala Ile Gly Thr Gly Phe Ile Lys Pro Asn
 20 25 30
 Leu Ser Thr Val Val Gly Gly Leu Tyr Asp Asp Gly Asp Pro Arg Arg
 35 40 45
 Asp Gln Gly Phe Leu Tyr Phe Tyr Met Ser Ile Ser Ile Gly Ser Leu

```

      50              55              60
Phe Ala Pro Ile Val Thr Gly Leu Leu Lys Asp His Tyr Gly Tyr His
65              70              75              80
Val Gly Phe Ile Ala Ala Ala Ile Gly Met Ala Leu Gly Leu Ile Ala
      85              90              95
Phe Phe His Gly Arg Ser Lys Leu Arg Glu Leu Ala Phe Asp Ile Pro
      100              105              110
Asn Pro Leu Ala Pro Gly Glu Gly Arg Arg Met Val Leu Arg
      115              120              125

```

<210> 373
 <211> 475
 <212> DNA
 <213> Homo sapiens

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<400> 373
acatgttgga aaaattgcct cccactctgg tgctacaggt atgaatctca gccacagtga
60
tgactgtggc agctacaggc ctgatgaaca cccaccaag aaaaggagca tcatgtgcct
120
gcttctctct ggttcctaaa tcttttgcc aaacattttc cccacaaccc tccactccag
180
ttggctggtc actgcctctc agaaagaagt cccagggtccc tgtcagcccc agagcgctg
240
catggactct gccactgtc cctttccaac acggaggccc ccaattctgg ggaccctac
300
accctaccct gtaccaccac atccccatgc ctgctccaga cagcactaac ctcccatgac
360
agtgggacca aagcagttct taaagggtcca atccactcag ttcttaaatg aaaaacagtt
420
gcccatgagt ccccccaaa gacgtccgca catatgcaa acattcgggtg tgcac
475

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<210> 374
 <211> 109
 <212> PRT
 <213> Homo sapiens

```

<400> 374
Met Gly Met Trp Trp Tyr Arg Val Gly Cys Arg Gly Pro Gln Asn Trp
1      5      10      15
Gly Pro Pro Cys Trp Lys Gly Thr Val Gly Arg Val His Ala Gly Ala
      20      25      30
Leu Gly Leu Thr Gly Thr Trp Asp Phe Phe Leu Arg Gly Ser Asp Gln
      35      40      45
Pro Thr Gly Val Glu Gly Cys Gly Glu Asn Val Trp Pro Lys Asp Leu
      50      55      60
Gly Thr Arg Glu Lys Gln Ala His Asp Ala Pro Phe Leu Gly Gly Val
65      70      75      80
Phe Ile Arg Pro Val Ala Ala Thr Val Ile Thr Val Ala Glu Ile His
      85      90      95
Thr Cys Ser Thr Arg Val Gly Gly Asn Phe Ser Asn Met
      100      105

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<210> 375
 <211> 332
 <212> DNA
 <213> Homo sapiens

<400> 375
 nnacgcgtcg cctccacctc gaaacccgcc ggcggtcgtt ttttcaccat ggcgcaccgc
 60
 aaggcccaag ttgcgacggt cacggacacg ctgtatttca cgccgtcgca atgggatgga
 120
 tgcattggcac ggatgcgtgg ggataagata tcagcactga agtggaatca gatgcagatg
 180
 gcggcatgct ccttcatagc ggcagtgggt gcgaagctgg gctgcccgc ggcactatg
 240
 ggcacggcgc agctgctgta ccagcgtttc catctatttc atgcgccgac tgagttttcg
 300
 ttacatgagg tggctttgac gtgtctcttc ac
 332

<210> 376
 <211> 110
 <212> PRT
 <213> Homo sapiens

<400> 376
 Xaa Arg Val Ala Ser Thr Ser Lys Pro Ala Gly Gly Arg Phe Phe Thr
 1 5 10 15
 Met Ala Asp Arg Lys Ala Gln Val Ala Thr Val Thr Asp Thr Leu Tyr
 20 25 30
 Phe Thr Pro Ser Gln Trp Asp Gly Cys Met Ala Arg Met Arg Gly Asp
 35 40 45
 Lys Ile Ser Ala Leu Lys Trp Asn Gln Met Gln Met Ala Ala Cys Ser
 50 55 60
 Phe Ile Ala Ala Val Gly Ala Lys Leu Gly Cys Pro Gln Arg Thr Met
 65 70 75 80
 Gly Thr Ala Gln Leu Leu Tyr Gln Arg Phe His Leu Phe His Ala Pro
 85 90 95
 Thr Glu Phe Ser Leu His Glu Val Ala Leu Thr Cys Leu Phe
 100 105 110

<210> 377
 <211> 369
 <212> DNA
 <213> Homo sapiens

<400> 377
 cgcgtgccag gtatgtcaac tgatctgtcg gatatttccg aggttgagta ccgtcaactg
 60
 aggctggaac gagtgggtgct gtgttcgggtg tggactcagg gaactgccgc agacgccgag
 120
 aacgctatgg cggagctgaa agcccttgct gaaacggcgg gatctcaggt actcgaagct
 180
 gtcattgcaac gtcggactac cccggatccg gcgacgtaca ttgggttcggg caaggtggct
 240

gagcttgccg aggtggtgcg ggcgactggt gccgatactg tcatttgtga cgggtgaactt
 300
 gacgccgctc agttgcgcaa cctcgaggat cgggtcaagn gcaaagttgt ggaccgggtcg
 360
 gtctgattc
 369

<210> 378

<211> 121

<212> PRT

<213> Homo sapiens

<400> 378

Arg	Val	Pro	Gly	Met	Ser	Thr	Asp	Leu	Ser	Asp	Ile	Ser	Glu	Val	Glu
1				5				10					15		
Tyr	Arg	Gln	Leu	Arg	Leu	Glu	Arg	Val	Val	Leu	Cys	Ser	Val	Trp	Thr
		20						25					30		
Gln	Gly	Thr	Ala	Ala	Asp	Ala	Glu	Asn	Ala	Met	Ala	Glu	Leu	Lys	Ala
		35					40					45			
Leu	Ala	Glu	Thr	Ala	Gly	Ser	Gln	Val	Leu	Glu	Ala	Val	Met	Gln	Arg
	50					55					60				
Arg	Thr	Thr	Pro	Asp	Pro	Ala	Thr	Tyr	Ile	Gly	Ser	Gly	Lys	Val	Ala
65				70					75				80		
Glu	Leu	Ala	Glu	Val	Val	Arg	Ala	Thr	Gly	Ala	Asp	Thr	Val	Ile	Cys
			85					90					95		
Asp	Gly	Glu	Leu	Asp	Ala	Ala	Gln	Leu	Arg	Asn	Leu	Glu	Asp	Arg	Val
		100						105					110		
Lys	Xaa	Lys	Val	Val	Asp	Arg	Ser	Val							
		115					120								

<210> 379

<211> 408

<212> DNA

<213> Homo sapiens

<400> 379

acgcgttact taaacttatc tgtaaataat aaattcatta tttctagttg gttaggtact
 60
 atgggctgtg gtttaccagg tgctatggca gctaaaattg cttatccaaa ccgtcaagca
 120
 gtagctatca caggcgacgg tgcgttccaa atggtaatgc aagactttgc tacagctgtt
 180
 caatataact taccaatgac aatctttgta ttaaataaca aacaattgtc attcattaaa
 240
 tatgaacaac aagctgctgg tgaattagag tatgccattg atttctctga tatggatcat
 300
 gctaaatttg ctgaagctgc tgggtggtaa ggctatgttg tgagagatgt aagtcgtctt
 360
 gacgacatcg ttgaagaggc aatgggtcaa gatgttccaa caatcggt
 408

<210> 380

<211> 136

<212> PRT

<213> Homo sapiens

<400> 380

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Thr Arg Tyr Leu Asn Leu Ser Val Asn Asn Lys Phe Ile Ile Ser Ser
 1           5           10           15
Trp Leu Gly Thr Met Gly Cys Gly Leu Pro Gly Ala Met Ala Ala Lys
      20           25           30
Ile Ala Tyr Pro Asn Arg Gln Ala Val Ala Ile Thr Gly Asp Gly Ala
      35           40           45
Phe Gln Met Val Met Gln Asp Phe Ala Thr Ala Val Gln Tyr Asn Leu
      50           55           60
Pro Met Thr Ile Phe Val Leu Asn Asn Lys Gln Leu Ser Phe Ile Lys
      65           70           75           80
Tyr Glu Gln Gln Ala Ala Gly Glu Leu Glu Tyr Ala Ile Asp Phe Ser
      85           90           95
Asp Met Asp His Ala Lys Phe Ala Glu Ala Ala Gly Gly Lys Gly Tyr
      100           105           110
Val Val Arg Asp Val Ser Arg Leu Asp Asp Ile Val Glu Glu Ala Met
      115           120           125
Ala Gln Asp Val Pro Thr Ile Val
      130           135

```

<210> 381

<211> 613

<212> DNA

<213> Homo sapiens

<400> 381

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naccggtcat aggcggggccc agtgggaagac caccgcaaca cagttgggtg agatccgcgt
60
tgagggcaag gtccctgcgcg tcccgcgaaa tctgggtcaag gcctaccact ctgggctgat
120
cgacgtcgag gactgaaccc tgggagcctg ggcgggtccag catgactgct cagggtcatt
180
acaaaaacgc gtcgatcccc taggggtgtc gtcgatgagca agcccgaagt gaccctgccc
240
gattccgccc ccgacgacct cgtcggttgag gacatcacca tcggcgacgg cctgaagcg
300
tccgctggca acctcgtcga agtgacactac gtcggcggtgg ccttaagcaa tggctctgag
360
ttcgattctt cctggaaccg cggggagccg ctgaccttcc aactaggggc tggccagggtg
420
atccccgagt gggatgaagg tgtccaaggt atgaaggctg gtggacgacg caaactcgtc
480
atccccacc accttgctta cgggtccgaa ggaatctccg gtgtgatcgc tggcgggtgag
540
acgtcgggtc tcgtctgcga ccttgctaac atcatctgac gtgacccccg ctcaagcagt
600
cttcgcgccc ggg
613

```

<210> 382

<211> 137

<212> PRT

<213> Homo sapiens

<400> 382

Leu Leu Arg Leu Ile Thr Lys Thr Arg Arg Ser Arg Arg Val Val Val
 1 5 10 15
 Met Ser Lys Pro Glu Val Thr Leu Pro Asp Ser Ala Pro Asp Asp Leu
 20 25 30
 Val Val Glu Asp Ile Thr Ile Gly Asp Gly Pro Glu Ala Ser Ala Gly
 35 40 45
 Asn Leu Val Glu Val His Tyr Val Gly Val Ala Leu Ser Asn Gly Arg
 50 55 60
 Glu Phe Asp Ser Ser Trp Asn Arg Gly Glu Pro Leu Thr Phe Gln Leu
 65 70 75 80
 Gly Ala Gly Gln Val Ile Pro Glu Trp Asp Glu Gly Val Gln Gly Met
 85 90 95
 Lys Val Gly Gly Arg Arg Lys Leu Val Ile Pro His His Leu Ala Tyr
 100 105 110
 Gly Pro Gln Gly Ile Ser Gly Val Ile Ala Gly Gly Glu Thr Leu Val
 115 120 125
 Phe Val Cys Asp Leu Val Asn Ile Ile
 130 135

<210> 383

<211> 352

<212> DNA

<213> Homo sapiens

<400> 383

nggagcaaca cctggtcctt gggaatgaag tgtaggagtt gcatttgctg aggttggtgt
 60
 ttgccaaaga gatgccagct tcttcgaact actgctgtgc aactcttcat gttcaaaacc
 120
 cagttttctg tttttcacac ctgaacatac accccctgc agttgggtgg ctccccggtt
 180
 accagctggg ctctatctac agagagagca atggcttccc ttcccttgaa ggaagtctca
 240
 ccctcacaag gacacttgat ccgctgcaaa gcagaaagtg tgcggaccct ttgggaaggg
 300
 cgttcttttc ttgttttagaa cctaggattc tgtttttccc aaacaggatc an
 352

<210> 384

<211> 93

<212> PRT

<213> Homo sapiens

<400> 384

Met Pro Ala Ser Ser Asn Tyr Cys Cys Ala Thr Leu His Val Gln Asn
 1 5 10 15
 Pro Val Phe Cys Phe Ser His Leu Asn Ile His Pro Pro Ala Val Gly
 20 25 30
 Trp Leu Pro Arg Tyr Gln Leu Gly Ser Ile Tyr Arg Glu Ser Asn Gly
 35 40 45
 Phe Pro Ser Leu Glu Gly Ser Leu Thr Leu Thr Arg Thr Leu Asp Pro

50 55 60
 Leu Gln Ser Arg Lys Cys Ala Asp Pro Leu Gly Arg Ala Phe Phe Ser
 65 70 75 80
 Cys Leu Glu Pro Arg Ile Leu Phe Phe Pro Asn Arg Ile
 85 90

<210> 385
 <211> 342
 <212> DNA
 <213> Homo sapiens

<400> 385
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 gcacctcggg caatgtcctg ggctgactg gcacacgcaa tcaaagcgag caacaacaca
 120
 caaaaacgca tcatgaggca gacgccaggg aagtgcagca agccgcagca ggcgcgcggc
 180
 gattggaaat atcggtgagg ctaatggtca ccagcgcttg caggttgat tcggtggcca
 240
 attcgcgga cgcacgaccc gccagttcca gtcgcgcgcg cagcaccagg cgacgcaagc
 300
 tgcggcgcaa ctccgggtgc accaacaaca ccgcactgtt ca
 342

<210> 386
 <211> 109
 <212> PRT
 <213> Homo sapiens

<400> 386
 Met Gln Asn Ala Pro Phe Thr Gly Arg Gln Val Asp Arg Ala Ala Ser
 1 5 10 15
 Thr Ser Gly Asn Val Leu Gly Leu Thr Gly Thr Arg Asn Gln Ser Glu
 20 25 30
 Gln Gln His Thr Lys Thr His His Glu Ala Asp Ala Arg Glu Val Thr
 35 40 45
 Glu Ala Ala Ala Gly Ala Arg Arg Leu Glu Ile Ser Val Arg Leu Met
 50 55 60
 Val Thr Ser Ala Cys Arg Leu Tyr Ser Val Ala Asn Ser Arg Asn Asp
 65 70 75 80
 Ser Thr Ala Ser Ser Ser Pro Arg Ser Thr Arg Arg Arg Lys Leu
 85 90 95
 Arg Arg Asn Ser Gly Cys Thr Asn Asn Thr Ala Leu Phe
 100 105

<210> 387
 <211> 379
 <212> DNA
 <213> Homo sapiens

<400> 387
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ggacgtgctg gcacgtetga catggtgcgt ggacccgcct tctcttcgcc tgcgcatgcc
 120
 atgcaagagg agcttgacaa tgtgctgat ctgcgccatg cgcggcagca agcgctcgat
 180
 gctgttcggt ccgagctgct cgaagcgcag caagcatgtg cctcgtgccca gctgcagctg
 240
 cagcatgtgc cagatgatcg tgtgcgagcg catcccatat accaggcgct ccatgcggac
 300
 gttgcttaca tgcagcaaga acttgatcac gtacgagacg cattggcttc ggcagaatct
 360
 gagaatgcga gcctgcgcg
 379

<210> 388

<211> 114

<212> PRT

<213> Homo sapiens

<400> 388

Met	Arg	Leu	Val	Arg	Asp	Gln	Val	Leu	Ala	Ala	Cys	Lys	Gln	Arg	Pro
1				5					10					15	
His	Gly	Ala	Pro	Gly	Ile	Trp	Asp	Ala	Leu	Ala	His	Asp	His	Leu	Ala
			20					25					30		
His	Ala	Ala	Ala	Ala	Ala	Gly	Thr	Arg	His	Met	Leu	Ala	Ala	Leu	Arg
			35				40					45			
Ala	Ala	Arg	Asn	Glu	Gln	His	Arg	Ala	Leu	Ala	Ala	Ala	His	Gly	Arg
	50					55				60					
Asp	His	Ala	His	Cys	Gln	Ala	Pro	Leu	Ala	Trp	His	Ala	Gln	Ala	Lys
65					70					75				80	
Arg	Arg	Arg	Val	His	Ala	Pro	Cys	Gln	Thr	Cys	Gln	His	Val	Pro	Gln
			85						90					95	
Pro	Arg	Ala	Arg	Ser	Ser	Leu	Gln	Ser	Thr	Leu	Pro	Met	Pro	Ala	Arg
			100					105						110	
His	Ala														

<210> 389

<211> 382

<212> DNA

<213> Homo sapiens

<400> 389

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 120
 gtattgcgtt tggagacgct tgggggtcaat tacggccagg tgcgcgccgt cgatgccctg
 180
 acgaccaccg tagagcgcgg caccatcacc tgcctcatgg gtcgaaatgg atcaggcaag
 240
 tcgtctctga tgtgggagat ccaaggggca acaaagtcct cagggagggt actgggtcaac
 300
 cagcagggtt cttgggctga cccccgaaa gccgacgccg cgaccgctcg acgaatggtg
 360

agcttagtcc cgcagtcagc cn
382

<210> 390
<211> 127
<212> PRT
<213> Homo sapiens

<400> 390
Xaa Trp Pro Thr Val Pro Leu Ser Val Arg Glu Ala Arg Arg Arg Val
1 5 10 15
Gly Pro Arg Pro Gly Leu Pro Arg Ala Pro Gln Pro Ser Glu Ala Met
20 25 30
Thr Trp Pro Gly Gly Gly Asn Glu Val Leu Arg Leu Glu Thr Leu Gly
35 40 45
Val Asn Tyr Gly Gln Val Arg Ala Val Asp Ala Leu Thr Thr Thr Val
50 55 60
Glu Arg Gly Thr Ile Thr Cys Leu Met Gly Arg Asn Gly Ser Gly Lys
65 70 75 80
Ser Ser Leu Met Trp Ala Ile Gln Gly Ala Thr Lys Ser Ser Gly Arg
85 90 95
Val Leu Val Asn His Glu Gly Ser Trp Ala Asp Pro Arg Lys Ala Asp
100 105 110
Ala Ala Thr Ala Arg Arg Met Val Ser Leu Val Pro Gln Ser Ala
115 120 125

<210> 391
<211> 456
<212> DNA
<213> Homo sapiens

<400> 391
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tgcgacccta tcggtggcat gcacgccttg ttcagcgact ctattcccca gcagatcttc
120
ctgcccgcgc cctccttctt tcgccgccga cgaggccgac gtggagacgt ggtgcagcga
180
ggccgatgaa tcctggacac ccaccgcgac gacctggccg ggatcattgt cgagcccatc
240
ttgcaaggag ccggaggcat gtggccgtgg tctccgtcct gtctgaagca cctgcgccgt
300
cgtgctgatg aacttgacct agttcttata gccgacgagg tcgctactgg atttgggcgg
360
actggcaaac ttttcgcatg cgagtgggcc gatatcggtc ctgacatcat ggtggttggg
420
aaatccatga ctggcggata cctgaccag tcggcc
456

<210> 392
<211> 55
<212> PRT
<213> Homo sapiens

<400> 392

Gly Ala Tyr His Gly Asp Thr Leu Gly Ala Met Ser Val Cys Asp Pro
 1 5 10 15
 Ile Gly Gly Met His Ala Xaa Phe Ser Asp Ser Ile Pro Gln Ile
 20 25 30
 Phe Leu Pro Ala Pro Ser Phe Phe Arg Arg Arg Gly Arg Arg Gly
 35 40 45
 Asp Val Val Gln Arg Gly Arg
 50 55

<210> 393

<211> 371

<212> DNA

<213> Homo sapiens

<400> 393

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 120
 aacaacctcc ccggttcgga actgtccatc ggcaccgaca ccgctctcaa cgtcatcgtc
 180
 gagcgatgg acaagattaa ggagtcgggt atcgcggtcca gacgctgctt cgtcgctgag
 240
 acgatgggtc gtgactgcgg atacctcgcg ttgatgtcgg gtatcgcagc tggcgctgag
 300
 cggatctata ccaacgagga cggtatctcc ctggacgac tagccaacga cgtccattgg
 360
 ttgcgggagt c
 371

<210> 394

<211> 123

<212> PRT

<213> Homo sapiens

<400> 394

Xaa Ala Leu Leu Val Ile Gly Gly Tyr Ser Ala Tyr Glu Gly Ile Tyr
 1 5 10 15
 Thr Met Met Thr Glu Arg Asp Arg Tyr Pro Ala Phe Arg Ile Pro Thr
 20 25 30
 Val Cys Ile Pro Ala Ser Ile Asp Asn Asn Leu Pro Gly Ser Glu Leu
 35 40 45
 Ser Ile Gly Thr Asp Thr Ala Leu Asn Val Ile Val Glu Ala Met Asp
 50 55 60
 Lys Ile Lys Glu Ser Gly Ile Ala Ser Arg Arg Cys Phe Val Val Glu
 65 70 75 80
 Thr Met Gly Arg Asp Cys Gly Tyr Leu Ala Leu Met Ser Gly Ile Ala
 85 90 95
 Ala Gly Ala Glu Arg Ile Tyr Thr Asn Glu Asp Gly Ile Ser Leu Asp
 100 105 110
 Asp Leu Ala Asn Asp Val His Trp Leu Arg Glu
 115 120

<210> 395
 <211> 351
 <212> DNA
 <213> Homo sapiens

<400> 395
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 120
 tctcatttct gttttctact ttacgattta tgttatctca tactcccat gttgcctgtt
 180
 ctccagtttt ttacttgtg ttatttccat tcttctattc ctgctcaatt tctgcctcag
 240
 ggcagaattg tgtccaacag ctcttaaatg cagcgcagaa actgtgatgt taaaaacatc
 300
 ttgttatccg gccccaaaac atgttgtcct tggtaactct tactggtttg t
 351

<210> 396
 <211> 90
 <212> PRT
 <213> Homo sapiens

<400> 396
 Met Val Glu Arg Gln Ser Lys Pro Met Ser Leu Lys Pro Ala Leu Ile
 1 5 10 15
 Ser Val Phe Tyr Phe Thr Ile Tyr Val Ile Ser Tyr Ser Pro Cys Cys
 20 25 30
 Leu Phe Ser Ser Phe Phe Thr Cys Val Ile Ser Ile Leu Leu Phe Leu
 35 40 45
 Leu Asn Phe Cys Leu Arg Ala Glu Leu Cys Pro Thr Ala Leu Lys Cys
 50 55 60
 Ser Ala Glu Thr Val Met Leu Lys Thr Ser Cys Tyr Pro Ala Pro Lys
 65 70 75 80
 His Val Val Leu Gly Asn Ser Tyr Trp Phe
 85 90

<210> 397
 <211> 483
 <212> DNA
 <213> Homo sapiens

<400> 397
 gccgtcatta aagagatcac cctctctctc caacctggtg atgtcctcgt cgacggtggt
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 aatgcttatt ttggtgatac ccgccgccgt gaggaggaaa tacgtccac cggcattcac
 120
 tatgttggtg ctggcatctc cgggtggggga gtcggggccc tgagggtccc atcaattatg
 180
 cctggcgggg ttaaggaatc ttacgaaatc atcggaccgg tcttagaaaa aatctccgcc
 240
 cacgtcgacg gtgaaccctg ctgcgcatgg atgggtactg acggcgccgg acacttcgtc
 300

aagatggtcc ataatggcat cgagtaagcc gatatgcagt tcattggcga ggcgccttc
 360
 ctttttgcn tgcccgccgg tttgaccaat gctgaggccg ccgatgcctt cgagtcgtgg
 420
 aaccatggcg acctcaattc ctacctcgtc gaaatcactt ctgggtact gcgtgccaaag
 480
 gat
 483

<210> 398

<211> 161

<212> PRT

<213> Homo sapiens

<400> 398

Ala	Val	Ile	Lys	Glu	Ile	Thr	Pro	Leu	Leu	Gln	Pro	Gly	Asp	Val	Leu
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Val	Asp	Gly	Gly	Asn	Ala	Tyr	Phe	Gly	Asp	Thr	Arg	Arg	Arg	Glu	Glu
	20							25				30			
Glu	Ile	Arg	Pro	Thr	Gly	Ile	His	Tyr	Val	Gly	Thr	Gly	Ile	Ser	Gly
	35					40				45					
Gly	Gly	Val	Gly	Ala	Leu	Arg	Val	Pro	Ser	Ile	Met	Pro	Gly	Gly	Val
	50					55				60					
Lys	Glu	Ser	Tyr	Glu	Ile	Ile	Gly	Pro	Val	Leu	Glu	Lys	Ile	Ser	Ala
65				70					75					80	
His	Val	Asp	Gly	Glu	Pro	Cys	Cys	Ala	Trp	Met	Gly	Thr	Asp	Gly	Ala
		85						90					95		
Gly	His	Phe	Val	Lys	Met	Val	His	Asn	Gly	Ile	Glu	Tyr	Ala	Asp	Met
	100							105					110		
Gln	Phe	Ile	Gly	Glu	Ala	Pro	Phe	Leu	Phe	Ala	Xaa	Pro	Ala	Gly	Leu
	115					120						125			
Thr	Asn	Ala	Glu	Ala	Ala	Asp	Ala	Phe	Glu	Ser	Trp	Asn	His	Gly	Asp
	130					135					140				
Leu	Asn	Ser	Tyr	Leu	Val	Glu	Ile	Thr	Ser	Arg	Val	Leu	Arg	Ala	Lys
145					150					155					160
Asp															

<210> 399

<211> 314

<212> DNA

<213> Homo sapiens

<400> 399

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 gggtcatcca cccatccact cattcaccca tctatccatc cactcatcca cccatccagt
 120
 cattcactca ttgtgccatc cactcatgta cccatccact cattcgccca ttatccatc
 180
 cactcaacca tccactcatc caccatcca nctcatcatc cgtccagtca cccatctatc
 240
 caccatgta tccatccact catccaccca tccactcatc tgtccatcca cttatccacc
 300

catctactca ccca
314

<210> 400
<211> 104
<212> PRT
<213> Homo sapiens

<400> 400
Xaa Gly Met Lys Thr Thr Gln Pro Phe Leu Ser Ser Asn Leu Leu Gln
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Ala Ser Val His Gly Ser Ser Thr His Pro Leu Ile His Pro Ser Ile
20 25 30
His Pro Leu Ile His Pro Ser Ser His Ser Leu Ile Cys Pro Ser Thr
35 40 45
His Val Pro Ile His Ser Phe Ala His Leu Ser Ile His Ser Thr Ile
50 55 60
His Ser Ser Thr His Pro Xaa His His Pro Ser Ser His Pro Ser Ile
65 70 75 80
His Pro Cys Ile His Pro Leu Ile His Pro Ser Thr His Leu Ser Ile
85 90 95
His Leu Ser Thr His Leu Leu Thr
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<210> 401
<211> 2165
<212> DNA
<213> Homo sapiens

<400> 401
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agaagcaaat atatacagtc aatttaacag tgtttacttc tctggattgt ttaatggtgt
120
caaaatgaaa gatctattga agtttcacta tacattgcat tgattgaacc ttggagagtt
180
ttatgaaaaa gaggggcatc ccttgccatc tgtttgccag tcttccttgc cccttccttt
240
gaaatgcctg cctctttttt gccagattg tttcctgacc atccgaactc agatggggtc
300
ctctaagttc ttcttgata ttcaaaaatc cttcacaag gccacgtgc gaagtgaatg
360
atctggaggt gcctgggcat ctgtgttga agggagtcaa gactcaccag ccagtcagtt
420
tgtgggctac agttgtccca caaaaatcag gcatgttcac ctcccctctg ggcccctaca
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600
tgagcctaca gttttgtact ggggtgcacg gatgacagct gggaagatgg aaaggcagct
660
tgaggattta tagcagctaa agggtaaatg ctgttatgca aaaggtcccc atatgaactt
720

cctacagggtg tagccgcagc caagtgtctg tacagctgct gagaatttgt cggatgatgta
780
aaaattcctc tttgcatcac aagcgagtgg aaagccaggg gctgcatgag tggagaaagc
840
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900
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960
agcttgtggc cttttgatcc gccccggaa tgcccaccgt gcgctgcttt gctgccttca
1020
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1140
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1260
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1320
gacagtctcg actctggctg cctaagacct ggaactggga gatgcctttg ctctcctggg
1380
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1500
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1560
gaaaagaact gttttccgat tcctgtaca tgccttga agggattttg gatgtctgtt
1620
cattatgaag atgggtgctg gtgtgtctgt agaggctatg gagatgaggg gacgagtaga
1680
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1740
ccttgccctc ctgaatttct tgcttcagga cgtaggagtc agcaagggg ttaaggtgat
1800
gcttgagaa gctgcagcgg tggggatctg atcgactcag tttctcatgc ttaaagatgt
1860
cattgatggt ctttctctct tccgagggtc tgcttctgaa actctggacg tgctgaatca
1920
ctgatggccg gctgaccgcc atatggctcag tgctttggcc atgggtgggtc tgggacaaac
1980
tggaacacaa gtcaccccta gcaatcagtt tctttttgct gatcaaaggg ggtggggagc
2040
cataagggtg gctgctggag aggctggccc cactcacttg ggacaaaagc ttttcttgg
2100
ccagtgggga catcatgcct gggttgcccc tagagtagag caggggcgtg taattaagtc
2160
catgg
2165

<210> 402

<211> 87

<212> PRT

<213> Homo sapiens

<400> 402

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Glu Tyr Pro Ala Gly Ser Leu Glu Leu Arg Pro Glu Leu His Arg Leu
 1             5             10             15
Pro Glu Tyr Arg Pro Gly Lys Ile Gly Glu Glu Arg Gly Ser Leu Trp
      20             25             30
Pro Phe Asp Pro Pro Pro Glu Cys Pro Pro Cys Ala Ala Leu Leu Pro
      35             40             45
Ser Ser Pro Ala Gln Arg Pro Ser Pro Ser Gln Arg Pro Pro Trp Met
      50             55             60
Gly Leu Arg Glu Thr Leu Pro Gly Pro Phe Ser Leu Gln Ser Gln Gly
65             70             75             80
Pro Asn Pro Pro Gly Cys Ala
      85

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<210> 403

<211> 369

<212> DNA

<213> Homo sapiens

<400> 403

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cccatgggtg tgtcccagga cggcgctcatg aagcgtcagg taaatgacaa ggaaacggtc
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120
ccttcgccca cgtcgcacga caacctcggtg cctgtccaga tgatcttttg cttcaagcag
180
cgcaacgcga aaaagatcaa tagccaccgc tgggtatttc atgcactggg ccgcatgcta
240
cagcccgaca tggtcgtctt ggtggacgtc ggcacgaagc ccggccacct cgccctatac
300
catctatggc aggcattcta tcaccgacct accttggggc gtgcttgccg cgaaattcat
360
gctatgatc
369

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<210> 404

<211> 123

<212> PRT

<213> Homo sapiens

<400> 404

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Pro Met Gly Val Ser Gln Asp Gly Val Met Lys Arg Gln Val Asn Asp
 1             5             10             15
Lys Glu Thr Val Ala His Leu Phe Glu Tyr Thr Thr Gln Val Ser Val
      20             25             30
Asp Ser Thr Pro Gln Leu Val Gln Pro Ser Pro Thr Ser His Asp Asn
      35             40             45
Leu Val Pro Val Gln Met Ile Phe Cys Phe Lys Gln Arg Asn Ala Lys
      50             55             60
Lys Ile Asn Ser His Arg Trp Val Phe His Ala Leu Gly Arg Met Leu
65             70             75             80
Gln Pro Asp Met Val Val Leu Val Asp Val Gly Thr Lys Pro Gly His

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85 90 95
 Leu Ala Leu Tyr His Leu Trp Gln Ala Phe Tyr His Arg Pro Thr Leu
 100 105 110
 Gly Gly Ala Cys Gly Glu Ile His Ala Met Ile
 115 120

<210> 405
 <211> 840
 <212> DNA
 <213> Homo sapiens

<400> 405
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 gactcgccct ggaccacgag ggccctgtcg gagacagtgg tggaggagag cgaccccaag
 120
 ccggccttca gcaagatgaa tgggtccatg gacaaaaagt catcgaccgt cagtgaggac
 180
 gtggaggcca ccgtgcccac gctgcagcgg accaagtcac ggatcgagca gggtatcgtg
 240
 gaccgctcag agacggggtg gctggacaag aaggaggggg agcaagccaa ggcgctgttt
 300
 gagaagggtga agaagttccg gacccatgtg gaggaggggg acattgtgta ccgcctctac
 360
 atgcggcaga ccatcatcaa ggtgatcaag ttcacacctca tcattctgta caccgtctac
 420
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 540
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 660
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 840

<210> 406
 <211> 91
 <212> PRT
 <213> Homo sapiens

<400> 406
 Leu Ile Cys Met Tyr Thr Leu Trp Trp Met Leu Arg Arg Ser Leu Lys
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 Lys Tyr Ser Phe Glu Ser Ile Arg Glu Glu Ser Ser Tyr Ser Asp Ile
 20 25 30
 Pro Asp Val Lys Asn Asp Phe Ala Phe Met Leu His Leu Ile Asp Gln
 35 40 45
 Tyr Asp Pro Leu Tyr Ser Lys Arg Phe Ala Val Phe Leu Ser Glu Val

50 55 60
 Ser Glu Asn Lys Leu Arg Gln Leu Asn Leu Asn Asn Glu Trp Thr Leu
 65 70 75 80
 Asp Lys Leu Arg Tyr Gly Glu Lys Thr Thr Arg
 85 90

<210> 407
 <211> 535
 <212> DNA
 <213> Homo sapiens

<400> 407
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 aggccttact ttgctctgcc tggcttcagg gtgtagggga tggagagctg gacttccagc
 120
 ctgcttcttg gctgtctagg ggccaggggc tcgggacaca gagctcctgg aggccgagca
 180
 caagccttgg gcagaggtga ggcagagctc tgactgtttc attcgactac gttgccaagg
 240
 agatgctcgc tcggagtggg tgctctggct ctgggattcc aaaccaagct gccttctctg
 300
 atgtggcctt agtgcctctg gccgatgtac cttggctctg cctggaccct ctctctcttc
 360
 caggcctctg tcccaccagg atgatgcta tccagagctc attgtcctct ccacttctct
 420
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 480
 gcactgagga ccacagcagc cctgcattc ccacgggcaa aggggtatgt gtagg
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<210> 408
 <211> 97
 <212> PRT
 <213> Homo sapiens

<400> 408
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 1 5 10 15
 Ala Phe Ser Asp Val Ala Leu Val Leu Trp Ala Asp Val Pro Trp Leu
 20 25 30
 Cys Leu Asp Pro Leu Ser Leu Pro Gly Leu Cys Pro Thr Arg Met Met
 35 40 45
 Pro Ile Gln Ser Ser Leu Ser Ser Pro Thr Ser Ser Pro Ser Phe Pro
 50 55 60
 Phe Arg Val Ser Leu Glu Gly Pro Ser Ser Ser Trp Trp Arg Cys Cys
 65 70 75 80
 Thr Glu Asp His Ser Ser Pro Arg Ile Pro Thr Gly Lys Gly Val Cys
 85 90 95
 Val

<210> 409
 <211> 375

<212> DNA

<213> Homo sapiens

<400> 409

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ngtgtcatgg gtgtctatac cagcgatgag gccaaactg ccaagacttt tggatttggg
60
ggacttccga ttacgactaa tatttctctt gccacaact tcaatatgga tgaaatttct
120
gatattgtct tccgtgtcaa tgataccagt ttgacaccaa ctgtgggacc agaattagct
180
agaaaattga ccgaaattgc tggctcttcag caagggggagt atcaggtgtc agatgcgact
240
gcagccttcc aagaagtgc acaattgttc ggctttataa ctacgattat tagtgccatt
300
gcaggaattt ccctttttgt tggaggggact ggtgttatga acatcatgct ggtttcggtg
360
acggagcgta cgcgt
375

```

<210> 410

<211> 125

<212> PRT

<213> Homo sapiens

<400> 410

```

Xaa Val Met Gly Val Tyr Thr Ser Asp Glu Ala Lys Thr Ala Lys Thr
1      5      10      15
Phe Gly Ile Gly Leu Pro Ile Thr Thr Asn Ile Ser Leu Ala Asn
20     25     30
Asn Phe Asn Met Asp Glu Ile Ser Asp Ile Val Phe Arg Val Asn Asp
35     40     45
Thr Ser Leu Thr Pro Thr Val Gly Pro Glu Leu Ala Arg Lys Leu Thr
50     55     60
Glu Ile Ala Gly Leu Gln Gln Gly Glu Tyr Gln Val Ser Asp Ala Thr
65     70     75     80
Ala Ala Phe Gln Glu Val Gln Gln Leu Phe Gly Phe Ile Thr Thr Ile
85     90     95
Ile Ser Ala Ile Ala Gly Ile Ser Leu Phe Val Gly Gly Thr Gly Val
100    105    110
Met Asn Ile Met Leu Val Ser Val Thr Glu Arg Thr Arg
115    120    125

```

<210> 411

<211> 409

<212> DNA

<213> Homo sapiens

<400> 411

```

ccacatactt caccctcctc accccctcca cctactccac cacctggcag tcgccatgca
60
ggatggggacg caactccacg tccacatgct ccggaccacg cggcgtgtgg tggatgtgca
120
gcacgcggtc ggggcccctt gagctcgaag gcgcggcgca tcgggcagtg ctgcgccggc
180

```

tggctgcagg gcacgtcgta ctggtgagac acgcggaagc acttgtggcc gatgtaggcg
 240
 cgatcggctg tcccgaactg gcgctgatag gccgtgtaca caacacaaac tgttgtactc
 300
 ccggtccacc acgatcatgg gctgggactc gtgttccagg tggggggcca gggcttgggc
 360
 ctgcggtgag cgcgtggggg ggatggggca tagcgtcggg gaggaggtg
 409

<210> 412
 <211> 119
 <212> PRT
 <213> Homo sapiens

<400> 412
 Met Pro His Pro Pro His Ala Leu Thr Ala Gly Pro Ser Pro Gly Pro
 1 5 10 15
 Pro Pro Gly Thr Arg Val Pro Ala His Asp Arg Gly Gly Pro Gly Val
 20 25 30
 Gln Gln Phe Val Leu Cys Thr Arg Pro Ile Ser Ala Ser Ser Gly Gln
 35 40 45
 Pro Ile Ala Pro Thr Ser Ala Thr Ser Ala Ser Ala Ser Arg Thr Ser
 50 55 60
 Thr Thr Cys Pro Ala Thr Arg Pro Ala Ser Thr Ala Arg Cys Ala Ala
 65 70 75 80
 Pro Ser Ser Ser Arg Gly Pro Asp Arg Val Leu His Ile His His Thr
 85 90 95
 Pro Arg Gly Pro Glu His Val Asp Val Glu Leu Arg Pro Ile Leu Asp
 100 105 110
 Gly Asp Cys Gln Val Val Glu
 115

<210> 413
 <211> 357
 <212> DNA
 <213> Homo sapiens

<400> 413
 ccgggcatcc caccaccggg tgtcatgaac caagtagtgg cccctatggt agggactcca
 60
 gcaccgggtg gaagtccata tggacaacag gtgggagttt tggggcctcc agggcagcag
 120
 gcaccacctc catatcccg cccacatcca gctggacccc ctgtcataca gcagccaaca
 180
 acacccatgt ttgtagctcc cccccaaag acccagcggc ttcttcactc agaggcctac
 240
 ctgaaatata ttgaaggact cagtgcggag tccaacagca ttagcaagtg ggatcagaca
 300
 ctggcagctc ggagacgga cgtccatttg tcgaaagaac aggagagccg cctaccc
 357

<210> 414
 <211> 119
 <212> PRT

<213> Homo sapiens

<400> 414

```

Pro Gly Ile Pro Pro Pro Gly Val Met Asn Gln Val Val Ala Pro Met
 1           5           10           15
Val Gly Thr Pro Ala Pro Gly Gly Ser Pro Tyr Gly Gln Gln Val Gly
      20           25           30
Val Leu Gly Pro Pro Gly Gln Gln Ala Pro Pro Pro Tyr Pro Gly Pro
      35           40           45
His Pro Ala Gly Pro Pro Val Ile Gln Gln Pro Thr Thr Pro Met Phe
      50           55           60
Val Ala Pro Pro Pro Lys Thr Gln Arg Leu Leu His Ser Glu Ala Tyr
      65           70           75           80
Leu Lys Tyr Ile Glu Gly Leu Ser Ala Glu Ser Asn Ser Ile Ser Lys
      85           90           95
Trp Asp Gln Thr Leu Ala Ala Arg Arg Arg Asp Val His Leu Ser Lys
      100          105          110
Glu Gln Glu Ser Arg Leu Pro
      115

```

<210> 415

<211> 332

<212> DNA

<213> Homo sapiens

<400> 415

```

tctagagcca acttggttat cgtaatgaat agagagacta catctatatc aattattacg
60
ctctatagta atcatgaagc ttgggttata tgtatgacaa aaattgcaga aaaatcgaaa
120
caagaatatg gcgacttact aaaagaaaaa gaccatttac aagatatgga acagcttgag
180
atgactatcg tctcgatcca tacgccgtat ccgtccattg tcagaattca aggaaaaatc
240
aacacattac agccagagct ttggcaagct cccaatttag caattcggtt aattgtgagc
300
aatccgccag agggacaacc catctcacgc gt
332

```

<210> 416

<211> 102

<212> PRT

<213> Homo sapiens

<400> 416

```

Met Asn Arg Glu Thr Thr Ser Ile Ser Ile Ile Thr Leu Tyr Ser Asn
 1           5           10           15
His Glu Ala Trp Val Ile Cys Met Thr Lys Ile Ala Glu Lys Ser Lys
      20           25           30
Gln Glu Tyr Gly Asp Leu Leu Lys Glu Lys Asp His Leu Gln Asp Met
      35           40           45
Glu Gln Leu Glu Met Thr Ile Val Ser Ile His Thr Pro Tyr Pro Ser
      50           55           60
Ile Val Arg Ile Gln Gly Lys Ile Asn Thr Leu Gln Pro Glu Leu Trp

```

```
<210> 417
<211> 483
<212> DNA
<213> Homo sapiens
```

```
<210> 418
<211> 161
<212> PRT
<213> Homo sapiens
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639

130 135 140
 Gly Pro Arg Ala Leu Asn Ala Asn Gly Ile Lys Val Leu Ala Asp Pro
 145 150 155 160
 Arg

<210> 419
 <211> 797
 <212> DNA
 <213> Homo sapiens

<400> 419
 atttcacccc aggaaaacca gtaaggacca atgattaagc ccaagggttg gtaccgagtt
 60
 cggatccata agtaccggcc gcccgagggtg ctggaatttg ggctcccccc ggtgaaaata
 120
 tccatgcagc cgcgttgtct taggtagaaa agggagactg ggggtgggtg ggctgagctc
 180
 aagcccctgc ctacatactt tagtagtaac gactcccgat ctgcatccaa cacatttacc
 240
 gaacttctag taagcgcccc ccgctgcaag cgaaagcact cccctgccaa gaaacagatc
 300
 ttttccactt aaaattccca aactcagacc ttccactttt tactgaacaa aaagcgtgta
 360
 catgatctga agggttgaca tgacattttc taaattgggc gaatcaggaa gaggttgatg
 420
 aaaatccttg acgttttctg gggataggac atttggtgtg gataacgttc ttaagtcgaa
 480
 tttcagtgtg gcagtgcacg cagattcttc attggtgtta gtgtatttcc atacgggatg
 540
 tattagtaca agaaatagtg ttccctttga cactcgaacc caaggagtgg tccgaggctt
 600
 tttgaggcaa cgtaggatca atgtctctga agcagatttg gtgaaggatg caggtctcat
 660
 aatttacaga gcaatcacag ccttctttga aacggagaaa ttagattcta tgaaattttg
 720
 tcagtgcaga tagatatgat gtggagaaac ggggaaaatt gagtacaaaa agatgaggct
 780
 tgaatgatgg ctggcca
 797

<210> 420
 <211> 106
 <212> PRT
 <213> Homo sapiens

<400> 420
 Met Arg Pro Ala Ser Phe Thr Lys Ser Ala Ser Glu Thr Leu Ile Leu
 1 5 10 15
 Arg Cys Leu Lys Lys Pro Arg Thr Thr Pro Trp Val Arg Val Ser Lys
 20 25 30
 Gly Thr Leu Phe Leu Val Leu Ile His Thr Val Trp Lys Tyr Thr Asn
 35 40 45
 Thr Asn Glu Glu Ser Ala Cys Thr Ala Thr Leu Lys Phe Asp Leu Arg


```

      50              55              60
Thr Leu Ser His Thr Asn Val Leu Ser Pro Glu Asn Val Lys Asp Phe
65              70              75              80
His Gln Pro Leu Pro Asp Ser Pro Asn Leu Glu Asn Val Met Ser Thr
      85              90              95
Leu Gln Ile Met Tyr Thr Leu Phe Val Gln
      100              105

```

<210> 421
 <211> 406
 <212> DNA
 <213> Homo sapiens

```

<400> 421
ggatccacca tgatggagcc caccaccca tcctcagtc acctgctgca gcttctccat
60
aaccacaacac aggtcaatct tgtctcccta aacacaccat gtgctctcat gctgccatgg
120
tttgccctggg gccctctcta cctcctctgc tttctggaga acccttgac tcctcccaag
180
ccttcaagtt ggaaagtga cagtcagcat atgtctctag ctcagccctt actgctgga
240
ttcatgaaga ttggttcaact gtcagccctt gaccagaacg tgtgttttag gaaagcagga
300
accaagtctt accaatgtct gtagtcccag cctccaccct ggcatacagt aggtgctcat
360
tgaatgtggg agggaaagag gagacacatg gaagggaatg tcattc
406

```

<210> 422
 <211> 104
 <212> PRT
 <213> Homo sapiens

```

<400> 422
Met Met Glu Pro Thr His Pro Ser Ser Val His Leu Leu Gln Leu Leu
1      5      10      15
His Asn Pro Thr Gln Val Asn Leu Val Ser Leu Asn Thr Pro Cys Ala
      20      25      30
Leu Met Leu Pro Trp Phe Ala Trp Gly Pro Leu Tyr Leu Leu Cys Phe
      35      40      45
Leu Glu Asn Pro Cys Thr Pro Pro Lys Pro Ser Ser Trp Lys Val Asn
50      55      60
Ser Gln His Met Ser Leu Ala Gln Pro Leu Leu Arg Gly Phe Met Lys
65      70      75      80
Ile Gly Ser Leu Ser Ala Pro Asp Gln Asn Val Cys Phe Arg Lys Ala
      85      90      95
Gly Thr Lys Ser Tyr Gln Cys Leu
      100

```

<210> 423
 <211> 628
 <212> DNA
 <213> Homo sapiens

<400> 423

ngccacccta cgctcgcct gcaatggcaa cttcagatcc ccggtggcac cgtagtctta
 60
 gagccaccgg ttctgagcgg ggaggacgac ggggttgggg cggaggaagg agaggagaa
 120
 ggagatgggg atttgctgac gcagaccaa gcccaaacgc cgactccagc acccgcttgg
 180
 ccggcgcccc cagccacacc gcgttcctg gcctcgcga atggctccct gttggtgccc
 240
 ctcttgagt ccaaggaggc gggcgtctac acttgccgtg cacacaatga gctgggcgccc
 300
 aactctacgt caatacgcgt ggcggtggca gcaaccgggc ccccaaaaca cgcgcctggc
 360
 gccgggggag aaccgacgg acaggccccg acctctgagc gcaagtccac agccaagggc
 420
 cggggcaaca gcgtcctgcc ttccaaaccc gagggcaaaa tcaaaggcca aggctggccc
 480
 aaggtcagca ttctcgggga gaccgagacg gagccggagg aggacacaag tgaggagag
 540
 gaggccgaag accagatcct cgcggaccgc gcggaggagc agcgtgtgtg caacggggac
 600
 ccctctcggt acgtttctaa ccacgcgt
 628

<210> 424

<211> 209

<212> PRT

<213> Homo sapiens

<400> 424

Xaa	His	Pro	Thr	Pro	Arg	Leu	Gln	Trp	Gln	Leu	Gln	Ile	Pro	Gly	Gly
1				5					10					15	
Thr	Val	Val	Leu	Glu	Pro	Pro	Val	Leu	Ser	Gly	Glu	Asp	Asp	Gly	Val
			20					25					30		
Gly	Ala	Glu	Glu	Gly	Glu	Gly	Glu	Gly	Asp	Gly	Asp	Leu	Leu	Thr	Gln
		35					40					45			
Thr	Gln	Ala	Gln	Thr	Pro	Thr	Pro	Ala	Pro	Ala	Trp	Pro	Ala	Pro	Pro
		50				55					60				
Ala	Thr	Pro	Arg	Phe	Leu	Ala	Leu	Ala	Asn	Gly	Ser	Leu	Leu	Val	Pro
65					70					75				80	
Leu	Leu	Ser	Ala	Lys	Glu	Ala	Gly	Val	Tyr	Thr	Cys	Arg	Ala	His	Asn
				85					90					95	
Glu	Leu	Gly	Ala	Asn	Ser	Thr	Ser	Ile	Arg	Val	Ala	Val	Ala	Ala	Thr
			100					105					110		
Gly	Pro	Pro	Lys	His	Ala	Pro	Gly	Ala	Gly	Gly	Glu	Pro	Asp	Gly	Gln
		115					120					125			
Ala	Pro	Thr	Ser	Glu	Arg	Lys	Ser	Thr	Ala	Lys	Gly	Arg	Gly	Asn	Ser
		130				135					140				
Val	Leu	Pro	Ser	Lys	Pro	Glu	Gly	Lys	Ile	Lys	Gly	Gln	Gly	Leu	Ala
145					150					155				160	
Lys	Val	Ser	Ile	Leu	Gly	Glu	Thr	Glu	Thr	Glu	Pro	Glu	Glu	Asp	Thr
				165				170						175	
Ser	Glu	Gly	Glu	Glu	Ala	Glu	Asp	Gln	Ile	Leu	Ala	Asp	Pro	Ala	Glu

180 185 190
 Glu Gln Arg Cys Gly Asn Gly Asp Pro Ser Arg Tyr Val Ser Asn His
 195 200 205
 Ala

<210> 425
 <211> 471
 <212> DNA
 <213> Homo sapiens

<400> 425
 ccggccgctcg aagactttga ggacgatgta gctcgcagcg cagcgttacg agccctggag
 60
 tacgtggatt tgaccccagg cactnaagtg cgcgtcatcg ccattgacac cgtgttccta
 120
 ggatcgtgca cgaatggccg tgaggactta cggctggctg ctgaggttcc caaaggacga
 180
 catatcgag cgggcacccg gatgctcgtc gccctggat ctgctcgtgt ccgtctgcag
 240
 gctatggagg aaggcctcga cgagatcggg tcccggtttg ctgacatctt tcgcaataac
 300
 tctgcgaaca atggcttggt actggctcag gttgaccccg aggtcgtcga agagttgtgg
 360
 gactttgccg agcagcatcc tggtgagcag ctcaccgtct ccctcgagaa tcggacgatc
 420
 aaccttcggg gtcgcacgac ctaccggttc catattgatg acgtcacgcg t
 471

<210> 426
 <211> 157
 <212> PRT
 <213> Homo sapiens

<400> 426
 Pro Ala Val Glu Asp Phe Glu Asp Asp Val Ala Arg Ser Ala Ala Leu
 1 5 10 15
 Arg Ala Leu Glu Tyr Val Asp Leu Thr Pro Gly Thr Xaa Val Arg Val
 20 25 30
 Ile Ala Ile Asp Thr Val Phe Leu Gly Ser Cys Thr Asn Gly Arg Glu
 35 40 45
 Asp Leu Arg Leu Ala Ala Glu Val Pro Lys Gly Arg His Ile Ala Ala
 50 55 60
 Gly Thr Arg Met Leu Val Ala Pro Gly Ser Ala Arg Val Arg Leu Gln
 65 70 75 80
 Ala Met Glu Glu Gly Leu Asp Glu Ile Gly Ser Arg Phe Ala Asp Ile
 85 90 95
 Phe Arg Asn Asn Ser Ala Asn Asn Gly Leu Leu Leu Ala Gln Val Asp
 100 105 110
 Pro Glu Val Val Glu Glu Leu Trp Asp Phe Ala Glu Gln His Pro Gly
 115 120 125
 Glu Gln Leu Thr Val Ser Leu Glu Asn Arg Thr Ile Asn Leu Pro Gly
 130 135 140
 Arg Thr Thr Tyr Pro Phe His Ile Asp Asp Val Thr Arg

145

150

155

<210> 427

<211> 546

<212> DNA

<213> Homo sapiens

<400> 427

ctagcggtag tagaaggat gcagttgat cgcggctact tgtctccgta tttcatcaac
60
aatcaagaaa caatgaatgc agagctagaa aatccattta ttcttcttgt tgataagaaa
120
atttctaata tccgtgactt gctaccaatt ttggaagggtg ttgctaaagc atcgcgcccc
180
ttgttgatca ttgcggaaga cgttgaaggc gaagcggttg caaccttggt tgtaaacact
240
atgcgcggca tcgtaaaagt agcggcagcg aaagcgccag gttttggtga tcgcgtaaaa
300
gcaatgcttc aagacattgc tgtgctaacg ggttcaactg ttatttcaga agaaattggc
360
attaagcttg aagaagcgac aattgaacag ttgggtacag cgaagcgcggt tacattgaca
420
aaagaaagta caacgattgt tgatgggtgcg ggtgttgacag ctaatattac tggctcgtgtt
480
gagcaaattc gtgcagaaat tgctaactct tcttctggct acgataaaga gaaattgcaa
540
gaacgc
546

<210> 428

<211> 182

<212> PRT

<213> Homo sapiens

<400> 428

Leu Ala Val Val Glu Gly Met Gln Phe Asp Arg Gly Tyr Leu Ser Pro
1 5 10 15
Tyr Phe Ile Asn Asn Gln Glu Thr Met Asn Ala Glu Leu Glu Asn Pro
20 25 30
Phe Ile Leu Leu Val Asp Lys Lys Ile Ser Asn Ile Arg Asp Leu Leu
35 40 45
Pro Ile Leu Glu Gly Val Ala Lys Ala Ser Arg Pro Leu Leu Ile Ile
50 55 60
Ala Glu Asp Val Glu Gly Glu Ala Leu Ala Thr Leu Val Val Asn Thr
65 70 75 80
Met Arg Gly Ile Val Lys Val Ala Ala Ala Lys Ala Pro Gly Phe Gly
85 90 95
Asp Arg Arg Lys Ala Met Leu Gln Asp Ile Ala Val Leu Thr Gly Ser
100 105 110
Thr Val Ile Ser Glu Glu Ile Gly Ile Lys Leu Glu Glu Ala Thr Ile
115 120 125
Glu Gln Leu Gly Thr Ala Lys Arg Val Thr Leu Thr Lys Glu Ser Thr
130 135 140
Thr Ile Val Asp Gly Ala Gly Val Ala Ala Asn Ile Thr Gly Arg Val

145 150 155 160
 Glu Gln Ile Arg Ala Glu Ile Ala Asn Ser Ser Ser Gly Tyr Asp Lys
 165 170 175
 Glu Lys Leu Gln Glu Arg
 180

<210> 429
 <211> 425
 <212> DNA
 <213> Homo sapiens

<400> 429
 gctagcagcc cttacaggag acgggctaata aataatgcag cagtggctcc gacaacttgc
 60
 ccgttgacgc cggtcacgga tccatttgc tttagtagac aggcgctcca aagtacacca
 120
 ctgggcagtt cgtccaaaag cagtccacct gtcttgcaag gccagcccc cgcagggttt
 180
 tctcaacacc ccggtttgct tgtgccttac acacaatgca aaaaatagct ctcagggacc
 240
 ctgtgagccc ctgcctggac ctctgacaca gccagagca catgccagtc cgttttctgg
 300
 tgcattgaca ccttcagcac ctctggggcc tgagatgaac aggagtgcag aggtcggctcc
 360
 cagttcagag cctgaagttc agactctgcc atatcttcct cactacattc caggagtgga
 420
 tcctg
 425

<210> 430
 <211> 130
 <212> PRT
 <213> Homo sapiens

<400> 430
 Met Gln Gln Trp Leu Arg Gln Leu Ala Arg Cys Ser Arg Ser Arg Ile
 1 5 10 15
 His Leu Leu Leu Val Asp Arg Arg Ser Lys Val His His Trp Ala Val
 20 25 30
 Arg Pro Lys Ala Val His Leu Ser Cys Lys Ala Gln Pro Pro Gln Gly
 35 40 45
 Phe Leu Asn Thr Pro Val Cys Leu Cys Leu Thr His Asn Ala Lys Asn
 50 55 60
 Ser Ser Gln Gly Pro Cys Glu Pro Leu Pro Gly Pro Leu Thr Gln Pro
 65 70 75 80
 Arg Ala His Ala Ser Pro Phe Ser Gly Ala Leu Thr Pro Ser Ala Pro
 85 90 95
 Pro Gly Pro Glu Met Asn Arg Ser Ala Glu Val Gly Pro Ser Ser Glu
 100 105 110
 Pro Glu Val Gln Thr Leu Pro Tyr Leu Pro His Tyr Ile Pro Gly Val
 115 120 125
 Asp Pro
 130

<210> 431
 <211> 192
 <212> DNA
 <213> Homo sapiens

<400> 431
 ctagccatcc accagcgtag acacacggga gagaggccct acactggcct cgggtgcaac
 60
 cgccgcttcc gccagcgcac ggccctcgtc atccaccagc gcatccacac gggcgagaag
 120
 cctnaccggt gcccgactg cgagcggcgc ttctcctcct cctctcgctt ggtcagtcac
 180
 cggcgtgtgc ac
 192

<210> 432
 <211> 64
 <212> PRT
 <213> Homo sapiens

<400> 432
 Leu Ala Ile His Gln Arg Thr His Thr Gly Glu Arg Pro Tyr Thr Gly
 1 5 10 15
 Leu Gly Cys Asn Arg Arg Phe Arg Gln Arg Thr Ala Leu Val Ile His
 20 25 30
 Gln Arg Ile His Thr Gly Glu Lys Pro Xaa Pro Cys Pro Asp Cys Glu
 35 40 45
 Arg Arg Phe Ser Ser Ser Ser Arg Leu Val Ser His Arg Arg Val His
 50 55 60

<210> 433
 <211> 635
 <212> DNA
 <213> Homo sapiens

<400> 433
 nngccggcgg ctgcgttggg atacgacgtc gctgcgattg ggcgtgagta tctttggtac
 60
 ctcatggagg agcgtggcgc gtatgaggag gccgccgcgc tcatgccgct gctgctccgg
 120
 accgaccgag gcgcgtggga cacgtttgtg tgctgctacc tcgagcggca ccaaagggat
 180
 gcgatactcc cgcacattcc gacgcaggac cccagctga gtgagatggt gtacgatctc
 240
 gtgctggtgc atctgctgca gcacgatccc acgcagctgt tggcgacgct ccgcgcattg
 300
 ccgagtcaca tctactcgaa gcaggcgggt gctgcggcga tcggcgatca cgcacgaacc
 360
 agccgcacgc tgctcgagt cctcgcacag ctgtacatgg ccgcacatca gcccggaag
 420
 gctctgacat actacatgcg cctgcgtgat ccatgcgtgt ttgatctcat tcgcgagtac
 480
 gatctgctga tcgatgtgca gcaccacatc ggcacgctcg tcgagctcga tcaggaatgc
 540

gccggctcca ctgagccgcg ctccagcgcg cttatgccgc tgctcgtgcc atataccac
 600
 tcgattccca tccagcgcgc catggcgcag ctcga
 635

<210> 434
 <211> 211
 <212> PRT
 <213> Homo sapiens

<400> 434
 Xaa Pro Ala Ala Leu Gly Tyr Asp Val Ala Ala Ile Gly Arg Glu
 1 5 10 15
 Tyr Leu Trp Tyr Leu Met Glu Glu Arg Gly Ala Tyr Ala Glu Ala Ala
 20 25 30
 Ala Leu Met Pro Leu Leu Leu Arg Thr Asp Arg Gly Ala Trp Asp Thr
 35 40 45
 Phe Val Cys Cys Tyr Leu Glu Arg His Gln Arg Asp Ala Ile Leu Pro
 50 55 60
 His Ile Pro Thr Gln Asp Pro Gln Leu Ser Glu Met Val Tyr Asp Leu
 65 70 75 80
 Val Leu Val His Leu Leu Gln His Asp Pro Thr Gln Leu Leu Ala Thr
 85 90 95
 Leu Arg Ala Trp Pro Ser His Ile Tyr Ser Lys Gln Ala Val Ala Ala
 100 105 110
 Ala Ile Gly Asp His Ala Arg Thr Ser Arg Thr Leu Leu Glu Cys Leu
 115 120 125
 Ala Gln Leu Tyr Met Ala Ala His Gln Pro Gly Lys Ala Leu Thr Tyr
 130 135 140
 Tyr Met Arg Leu Arg Asp Pro Cys Val Phe Asp Leu Ile Arg Glu Tyr
 145 150 155 160
 Asp Leu Leu Ile Asp Val Gln His His Ile Gly Thr Leu Val Glu Leu
 165 170 175
 Asp Gln Glu Cys Ala Gly Ser Thr Glu Pro Arg Ser Ser Ala Leu Met
 180 185 190
 Pro Leu Leu Val Pro Tyr Thr His Ser Ile Pro Ile Gln Arg Ala Met
 195 200 205
 Ala Gln Leu
 210

<210> 435
 <211> 493
 <212> DNA
 <213> Homo sapiens

<400> 435
 nncgtacgtt cgcgtatattt ccgcgcccgg gaagctatcg ataataaagt tcaaccgctg
 60
 atccagcgtt agcaatggcg ggcacaggaa gggacttag gcatgcagaa agaaaagctt
 120
 tccgctctga tggatgggtga atcgttcgac agcgagctgt tgagttctct gtcgcaagat
 180
 cgaacgcttc aacaaagctg gcagggtat cacctgatac gtgacacact gcgaggtgat
 240

gtcgggcaag tgatgcatct cgacatcgcc gatcgcgtag ccgctgcact tgagaaagaa
 300
 cccgcccggc tgggtgccttc cgccgttcag gaatctcagc cgcagcctca cacctggcag
 360
 aaaatgccgt tctgggacaa agtgcgtccc tgggcgagcc agattacgca aatcggtatg
 420
 gcggcctgcg tgcgctggc ggtgatcgtc ggcgtgcagc agtacaacca gccttctgcg
 480
 ccatcgaacg cgt
 493

<210> 436
 <211> 130
 <212> PRT
 <213> Homo sapiens

<400> 436
 Met Gln Lys Glu Lys Leu Ser Ala Leu Met Asp Gly Glu Ser Phe Asp
 1 5 10 15
 Ser Glu Leu Leu Ser Ser Leu Ser Gln Asp Arg Thr Leu Gln Gln Ser
 20 25 30
 Trp Gln Gly Tyr His Leu Ile Arg Asp Thr Leu Arg Gly Asp Val Gly
 35 40 45
 Gln Val Met His Leu Asp Ile Ala Asp Arg Val Ala Ala Ala Leu Glu
 50 55 60
 Lys Glu Pro Ala Arg Leu Val Pro Ser Ala Val Gln Glu Ser Gln Pro
 65 70 75 80
 Gln Pro His Thr Trp Gln Lys Met Pro Phe Trp Asp Lys Val Arg Pro
 85 90 95
 Trp Ala Ser Gln Ile Thr Gln Ile Gly Met Ala Ala Cys Val Ser Leu
 100 105 110
 Ala Val Ile Val Gly Val Gln Gln Tyr Asn Gln Pro Ser Ala Pro Ser
 115 120 125
 Asn Ala
 130

<210> 437
 <211> 447
 <212> DNA
 <213> Homo sapiens

<400> 437
 ntggtaaccg gtgtccctga tatggaccct gctgtgtag agcgtaaatt atttatttta
 60
 cgtaattatg taacacgcat ctgtttggag tctgttaatg gaattaagga caacttttac
 120
 attaatacat tctcatacaa aacaatcggt tataaaggtc agttaaccac tgaacaagtg
 180
 ccacaatatt tcttagattt acaaaatcca agtatggtaa cggcattagc gcttggtcat
 240
 tcacgtttct caacaaatac atttctctgt tggcgtttag cacaaccatt ccgttacatc
 300
 gctcataatg gcgaaatcaa tacggttcgc ggtaatatca attggatgaa agcacgtgaa
 360

gcgttacttg aagctgaatt ttctactcgc tcagaattag atatgttaat gccaatctgt
420

acggatggta tgtctgactc ggcaagg
447

<210> 438

<211> 149

<212> PRT

<213> Homo sapiens

<400> 438

Xaa	Val	Thr	Gly	Val	Pro	Asp	Met	Asp	Pro	Ala	Val	Leu	Glu	Arg	Lys
1				5					10					15	
Leu	Phe	Ile	Leu	Arg	Asn	Tyr	Val	Thr	Arg	Ile	Cys	Leu	Glu	Ser	Val
			20					25					30		
Asn	Gly	Ile	Lys	Asp	Asn	Phe	Tyr	Ile	Asn	Thr	Phe	Ser	Tyr	Lys	Thr
			35				40					45			
Ile	Val	Tyr	Lys	Gly	Gln	Leu	Thr	Thr	Glu	Gln	Val	Pro	Gln	Tyr	Phe
	50					55					60				
Leu	Asp	Leu	Gln	Asn	Pro	Ser	Met	Val	Thr	Ala	Leu	Ala	Leu	Val	His
65					70					75				80	
Ser	Arg	Phe	Ser	Thr	Asn	Thr	Phe	Pro	Arg	Trp	Arg	Leu	Ala	Gln	Pro
			85					90					95		
Phe	Arg	Tyr	Ile	Ala	His	Asn	Gly	Glu	Ile	Asn	Thr	Val	Arg	Gly	Asn
			100					105					110		
Ile	Asn	Trp	Met	Lys	Ala	Arg	Glu	Ala	Leu	Leu	Glu	Ala	Glu	Phe	Phe
		115					120					125			
Thr	Arg	Ser	Glu	Leu	Asp	Met	Leu	Met	Pro	Ile	Cys	Thr	Asp	Gly	Met
	130					135					140				
Ser	Asp	Ser	Ala	Arg											

<210> 439

<211> 395

<212> DNA

<213> Homo sapiens

<400> 439

nacgcgtgaa gggagagtgg ggccgagccc caggaggctg tcctgcagca gctgcaccag
60
cttcccaggg gccggctgga cctggccacg caaagcctga cggaggagac ctgcagggcc
120
ctgggcaagc tgctgccgag ggagacgctg tgcacggagc tggctcctgag tgactgcatg
180
ctcagcgagg aagggggccac actgctgctc cgaggcctgt gtgccaacac cgtgctgcgc
240
tttctggact taaagggcaa caaccttcgg gctgcagggg ccgaggctct gggaaaactc
300
ctccaacaga acaagtccat tcagagcctc acgctggagt ggaacagcct gggcacgtgg
360
gacgatgcct tcgccacctt ctgcgggggc ctggc
395

<210> 440

<211> 128

<212> PRT

<213> Homo sapiens

<400> 440

```

Arg Glu Ser Gly Ala Glu Pro Gln Glu Ala Val Leu Gln Gln Leu His
 1           5           10           15
Gln Leu Pro Arg Gly Arg Leu Asp Leu Ala Thr Gln Ser Leu Thr Val
          20           25           30
Glu Thr Cys Arg Ala Leu Gly Lys Leu Leu Pro Arg Glu Thr Leu Cys
          35           40           45
Thr Glu Leu Val Leu Ser Asp Cys Met Leu Ser Glu Glu Gly Ala Thr
          50           55           60
Leu Leu Leu Arg Gly Leu Cys Ala Asn Thr Val Leu Arg Phe Leu Asp
65           70           75           80
Leu Lys Gly Asn Asn Leu Arg Ala Ala Gly Ala Glu Ala Leu Gly Lys
          85           90           95
Leu Leu Gln Gln Asn Lys Ser Ile Gln Ser Leu Thr Leu Glu Trp Asn
          100          105          110
Ser Leu Gly Thr Trp Asp Asp Ala Phe Ala Thr Phe Cys Gly Gly Leu
          115          120          125

```

<210> 441

<211> 364

<212> DNA

<213> Homo sapiens

<400> 441

```

gcccagtact acgtgaacat gttcgatgcc gagcagggct tcttcgacag gcgcagcccg
60
ggcggcgagt tccaagccgg cttggatccg gaatcctggg gcggtctgtt cactgagacc
120
gacggttgga acttcgcctt ccacgctcca caggacggcc gggggctggc cgcgctctac
180
ggcgggtccga aaggcttggga gaacaagctc gatgcctttt tcgcgacgcc ggaaaacgcy
240
gacaagccgg cgtacggcgg aatccacgaa atggtcgagg ccagagcggc ccggatgggc
300
caattgggca tgtccaacga gccctcgac catattccct acatctacaa ctatgccggc
360
gcgc
364

```

<210> 442

<211> 121

<212> PRT

<213> Homo sapiens

<400> 442

```

Ala Gln Tyr Tyr Val Asn Met Phe Asp Ala Glu Gln Gly Phe Phe Asp
 1           5           10           15
Arg Arg Ser Pro Gly Gly Glu Phe Gln Ala Gly Leu Asp Pro Glu Ser
          20           25           30
Trp Gly Gly Leu Phe Thr Glu Thr Asp Gly Trp Asn Phe Ala Phe His

```

```

      35              40              45
Ala Pro Gln Asp Gly Arg Gly Leu Ala Ala Leu Tyr Gly Gly Pro Lys
      50              55              60
Gly Leu Glu Asn Lys Leu Asp Ala Phe Phe Ala Thr Pro Glu Asn Ala
      65              70              75              80
Asp Lys Pro Ala Tyr Gly Gly Ile His Glu Met Val Glu Ala Arg Ala
      85              90              95
Val Arg Met Gly Gln Leu Gly Met Ser Asn Glu Pro Ser His His Ile
      100              105              110
Pro Tyr Ile Tyr Asn Tyr Ala Gly Ala
      115              120

```

<210> 443
 <211> 430
 <212> DNA
 <213> Homo sapiens

```

<400> 443
accggttacg gctcagtgca acaagagatg ttcgccaaca acctcgtgcg gatgccgctg
60
ctcatggtg c tggcaatccc cttegccaag atcctctcga cgaccctgtc catcggatcg
120
ggcgggtccgg cggcgtcttc cggccctggc atgggtcatcg gcggagccac tggcgcgga
180
ctgtggcgcc tctcgaggg gctgccaggt atcccatcct caccgatgag tttcgtcatt
240
gtcggcatga tcgctgctt cgggtcggtt gcccatgccc cactcggcgt gctgctcatg
300
gttggcgaga tgaccgaaa cctgtcgctg ctcgctcctg gcatgatcgc cgtcgccgtc
360
gctggccgag ttgtcgggga cacttcgatc tacacctctc agtcaagga tcgctggag
420
ggcgacgcgt
430

```

<210> 444
 <211> 143
 <212> PRT
 <213> Homo sapiens

```

<400> 444
Thr Gly Tyr Gly Ser Val Gln Gln Glu Met Phe Ala Asn Asn Leu Val
1      5      10      15
Arg Met Pro Leu Leu Met Val Leu Ala Ile Pro Phe Ala Lys Ile Leu
20     25     30
Ser Thr Thr Leu Ser Ile Gly Ser Gly Gly Pro Ala Ala Ser Ser Gly
35     40     45
Pro Gly Met Val Ile Gly Gly Ala Thr Gly Ala Ala Leu Trp Arg Leu
50     55     60
Leu Glu Gly Leu Pro Gly Ile Pro Ser Ser Pro Met Ser Phe Val Ile
65     70     75     80
Val Gly Met Ile Ala Cys Phe Gly Ala Val Ala His Ala Pro Leu Gly
85     90     95
Val Leu Leu Met Val Gly Glu Met Thr Gly Asn Leu Ser Leu Leu Ala

```

100 105 110
 Pro Gly Met Ile Ala Val Ala Val Ala Gly Arg Val Val Gly Asp Thr
 115 120 125
 Ser Ile Tyr Thr Ser Gln Leu Lys Asp Arg Leu Glu Gly Asp Ala
 130 135 140

<210> 445
 <211> 360
 <212> DNA
 <213> Homo sapiens

<400> 445
 ccatggggct gcctagcctc tggggaggcc cctcagctgg tgacaccagc agggcagatt
 60
 tcttgcttta ttgtcaccc tgtccagggt tccctctgtt tgtgaggag ctgctgccac
 120
 cttgggtcca ggaagcatga agctccgcag gtcagcctcc tgggtggagg acttttcctt
 180
 agttttcttt gctcttctgc tctgagcca gccctggctg gacctttgat cccttctctc
 240
 tttatcagga aattttctga ctttcttctt ttgccttttc aagatctgtg atgccatctc
 300
 caagtgggaa caagccatga aggagctgca ccccgaaag tctgaggggtg ggacacgcgt
 360

<210> 446
 <211> 101
 <212> PRT
 <213> Homo sapiens

<400> 446
 Met Ala Cys Ser His Leu Glu Met Ala Ser Gln Ile Leu Lys Arg Gln
 1 5 10 15
 Lys Lys Lys Val Arg Lys Phe Pro Asp Lys Glu Arg Arg Asp Gln Arg
 20 25 30
 Ser Ser Gln Gly Trp Thr Gln Ser Arg Arg Ala Lys Lys Thr Lys Glu
 35 40 45
 Lys Ser Ser His Gln Glu Ala Asp Leu Arg Ser Phe Met Leu Pro Gly
 50 55 60
 Pro Lys Val Ala Ala Ala Pro Ser Gln Thr Glu Gly Thr Leu Asp Arg
 65 70 75 80
 Val Ser Asn Lys Ala Arg Asn Leu Pro Cys Trp Cys His Gln Leu Arg
 85 90 95
 Gly Leu Pro Arg Gly
 100

<210> 447
 <211> 487
 <212> DNA
 <213> Homo sapiens

<400> 447
 acgcgtgaag ggggaaattg ctctgtccac ctgaggatta atcattaccc tggaaccctt
 60

cccaaggcca tcaaggaaca cgcacccctt accagacctt ccagctgctg ggggctctcc
 120
 gagtgaggct gaggtcatgg agaagggat ggggggcccc catggccagc tggacctgat
 180
 cactgcctcc cactcagcc acagccctca gggccctgtg ccagtccaga agcccattca
 240
 gggacacctt tggccaatgt tctgtttcat ctgagaggca accttcccca gtgccccaac
 300
 catagcgttt tccccaaac accctcagga aggagggacc actacctgtg cagggggggc
 360
 caggagcctc ctgagagcct catatgggga ggaagtggta ccatctcacc cccattgcct
 420
 ttctctcta ctccacctg gccagcttcc ctcaagtccc ctctgcctc agtgcctctt
 480
 cacgcgt
 487

<210> 448
 <211> 117
 <212> PRT
 <213> Homo sapiens

<400> 448
 Met Glu Lys Gly Met Gly Gly Pro His Gly Gln Leu Asp Leu Ile Thr
 1 5 10 15
 Ala Ser Pro Leu Ser His Ser Pro Gln Gly Pro Val Pro Val Gln Lys
 20 25 30
 Pro Ile Gln Gly His Leu Trp Pro Met Phe Cys Phe Ile Cys Glu Ala
 35 40 45
 Thr Phe Pro Ser Ala Pro Thr Ile Ala Phe Ser Pro Lys His Pro Gln
 50 55 60
 Glu Gly Gly Thr Thr Thr Cys Ala Gly Gly Ala Arg Ser Leu Leu Arg
 65 70 75 80
 Ala Ser Tyr Gly Glu Val Val Pro Ser His Pro His Cys Leu Ser
 85 90 95
 Leu Leu Leu Pro Pro Gly Gln Leu Pro Ser Val Pro Leu Leu Pro Gln
 100 105 110
 Cys Pro Phe Thr Arg
 115

<210> 449
 <211> 353
 <212> DNA
 <213> Homo sapiens

<400> 449
 gagctcagcc agttggagtt tgagaagcgg cagctgcaca gggacttggg gcaggccaag
 60
 gagaaggggg agcgggcaga gaagctggag agggagctac agcgactcca ggaggagaac
 120
 gggaggctgg ccaggaaggt gacctccctg gagacagcca ccgagaaagt cgaggccctg
 180
 gagcatgaga gccagggcct gcagctggag aaccggactc tgaggaagtc tctggacacc
 240

ttgcagaacg tgtccctgca gcttgagggc ctggagcgtg acaacaagca gctggacgca
300
gagaacctgg agctgcgcag gctggtggag accatgcgga gacgacaacg cgt
353

<210> 450
<211> 117
<212> PRT
<213> Homo sapiens

<400> 450
Glu Leu Ser Gln Leu Glu Phe Glu Lys Arg Gln Leu His Arg Asp Leu
1 5 10 15
Glu Gln Ala Lys Glu Lys Gly Glu Arg Ala Glu Lys Leu Glu Arg Glu
20 25 30
Leu Gln Arg Leu Gln Glu Glu Asn Gly Arg Leu Ala Arg Lys Val Thr
35 40 45
Ser Leu Glu Thr Ala Thr Glu Lys Val Glu Ala Leu Glu His Glu Ser
50 55 60
Gln Gly Leu Gln Leu Glu Asn Arg Thr Leu Arg Lys Ser Leu Asp Thr
65 70 75 80
Leu Gln Asn Val Ser Leu Gln Leu Glu Gly Leu Glu Arg Asp Asn Lys
85 90 95
Gln Leu Asp Ala Glu Asn Leu Glu Leu Arg Arg Leu Val Glu Thr Met
100 105 110
Arg Arg Arg Gln Arg
115

<210> 451
<211> 444
<212> DNA
<213> Homo sapiens

<400> 451
gtgatgcggc tgactaagcc tactttatcc accaatatcc cagtaacatg tgaagagaaa
60
gacttacctg gagatctctt taaccagctg atgagagatg atccttcaac cgtaaagtgt
120
gcagaagttt taatgttggg agaaatgctg actttaccac agaattttgg gaatatattt
180
ttgggagaga ccttttccag ttatatcagc gttcataatg atagcaatca agttgtaaaa
240
gacatattag taaaagctga tcttcagaca agttctcagc gtttaaattt ttcagcctcc
300
aatgctgcag tggctgaact taaaccggat tgttgattg atgatgtcat acatcatgaa
360
gtcaaagaaa ttggaacaca catcttggtg tgtgctgtga gttatacaac tcaggctgga
420
gaaaaaatgt atttcagaaa attt
444

<210> 452
<211> 148
<212> PRT

<213> Homo sapiens

<400> 452

```

Val Met Arg Leu Thr Lys Pro Thr Leu Phe Thr Asn Ile Pro Val Thr
 1           5           10           15
Cys Glu Glu Lys Asp Leu Pro Gly Asp Leu Phe Asn Gln Leu Met Arg
      20           25           30
Asp Asp Pro Ser Thr Val Asn Gly Ala Glu Val Leu Met Leu Gly Glu
      35           40           45
Met Leu Thr Leu Pro Gln Asn Phe Gly Asn Ile Phe Leu Gly Glu Thr
      50           55           60
Phe Ser Ser Tyr Ile Ser Val His Asn Asp Ser Asn Gln Val Val Lys
65           70           75           80
Asp Ile Leu Val Lys Ala Asp Leu Gln Thr Ser Ser Gln Arg Leu Asn
      85           90           95
Leu Ser Ala Ser Asn Ala Ala Val Ala Glu Leu Lys Pro Asp Cys Cys
      100          105          110
Ile Asp Asp Val Ile His His Glu Val Lys Glu Ile Gly Thr His Ile
      115          120          125
Leu Val Cys Ala Val Ser Tyr Thr Thr Gln Ala Gly Glu Lys Met Tyr
      130          135          140
Phe Arg Lys Phe
145

```

<210> 453

<211> 373

<212> DNA

<213> Homo sapiens

<400> 453

```

gctagctctg accccacctt tgccaagtgg cactaggggtg gccaatgggg actagggttg
60
tataattgga aaatacagtc tcccctgttg tccaagaaag gcccagatg acctggggct
120
tgaaaggcac tcccgctggg tgcttcctgg gagcaggtgg ggggcagcgg ggcggcgggg
180
cctgtctgtg ctgagcatcc ccagctccag ggcaggtgct gggctctgag cccactggt
240
gcgttttggg atgggctggc ctgcgcggct gtcgtttcag agcacacaga agagaccctg
300
ccacaggagg agtgggagga gaagctgttg atgttcctgc gagacaccct ggccatcatt
360
tctgacaacg cgt
373

```

<210> 454

<211> 108

<212> PRT

<213> Homo sapiens

<400> 454

```

Met Met Ala Arg Val Ser Arg Arg Asn Ile Asn Ser Phe Ser Ser His
 1           5           10           15
Ser Ser Cys Gly Arg Val Ser Ser Val Cys Ser Glu Thr Thr Ala Ala

```

```

      20      25      30
Gln Ala Ser Pro Ser Gln Asn Ala Pro Val Gly Leu Arg Ala Gln His
      35      40      45
Leu Pro Trp Ser Trp Gly Cys Ser Ala Gln Thr Gly Pro Ala Ala Pro
      50      55      60
Leu Pro Pro Thr Cys Ser Gln Glu Ala Pro Ser Gly Ser Ala Phe Gln
      65      70      75      80
Ala Pro Gly His Leu Gly Pro Phe Leu Asp Asn Arg Gly Asp Cys Ile
      85      90      95
Phe Gln Leu Tyr Asn Pro Ser Pro His Trp Pro Pro
      100      105

```

<210> 455
 <211> 602
 <212> DNA
 <213> Homo sapiens

```

<400> 455
cctaggcaaa gcatgcccac cctacctccc cttaccctta cccttcattt tcccctaagc
60
acccatcacc accgatgtta ctgtatgtgt ttgcttacgc tgacagccca ccacccacac
120
tggaatgtcc gcacgacaaa ggcaggactc ttggctgcct tagccacagc tggatcccca
180
gagctttgta ggggtgttggg cacagagtgg agtgggtact taataagtat ctgtggaatg
240
aacatgtaca gagtgaagcc ctgtgcccag aacaggctca aaataagctc aattcctttc
300
cttgcacatt actaagtcct ttttctctcg cccctctca ctgacctggt tttgatgcca
360
gacagcacag atgggctagg gaggcagggt gggaagcaga gatctgcgtc tcttgagct
420
ggagctgggt ggtggggctc cttcctgggt ctgcggaggc tcattgggga ggtggcagcg
480
acccctcag gagcctctgt cgctgcact cagatctgtg cctttccaca gcgcccggag
540
gaagacttgc tcaggagata aattcaaaga caacaggaag ctggacgtgg tggctcacgc
600
gt
602

```

<210> 456
 <211> 100
 <212> PRT
 <213> Homo sapiens

```

<400> 456
Met Pro Thr Leu Pro Pro Leu Thr Leu Thr Leu His Phe Pro Leu Ser
1      5      10      15
Thr His His His Arg Cys Tyr Cys Met Cys Leu Leu Thr Leu Thr Ala
      20      25      30
His His Pro His Trp Asn Val Arg Thr Thr Lys Ala Gly Leu Leu Ala
      35      40      45
Ala Leu Ala Thr Ala Gly Ser Pro Glu Leu Cys Arg Val Leu Gly Thr

```



```

      50              55              60
Glu Trp Ser Gly Tyr Leu Ile Ser Ile Cys Gly Met Asn Met Tyr Arg
65              70              75              80
Val Lys Pro Cys Ala Gln Asn Arg Leu Lys Ile Ser Ser Ile Pro Phe
      85              90              95
Leu Ala Thr Tyr
      100

```

<210> 457
 <211> 324
 <212> DNA
 <213> Homo sapiens

```

<400> 457
acgcgtcatg tggatattcc tgggaggttc ccaggaacgt ttctggacgg gcccccgacc
60
agaggtcagg gaacttttct tattattctg cactgccccg gggatagtca aaccaggtct
120
tccccttctg ctggccgcaa cagccagcc gccgccacga ccgcacgctg aattcatgac
180
ccgacacgcg acgtggcagc gagcacaccc accgctagga gaaagagcgc tcatcgaaga
240
tcgttttctg tccactggcc agcgccacta tgatcagggtg gggatatccgc ccggcggcgg
300
gagcaccggg acgccggggc gccg
324

```

<210> 458
 <211> 105
 <212> PRT
 <213> Homo sapiens

```

<400> 458
Met Trp Ile Phe Leu Gly Gly Ser Gln Glu Arg Phe Trp Thr Gly Pro
1              5              10              15
Arg Pro Glu Val Arg Glu Leu Phe Leu Leu Phe Cys Thr Cys Pro Gly
      20              25              30
Ile Val Lys Pro Gly Leu Pro Leu Leu Leu Ala Ala Thr Arg Gln Pro
      35              40              45
Pro Pro Arg Pro His Ala Glu Phe Met Thr Arg His Ala Thr Trp Gln
      50              55              60
Arg Ala His Pro Pro Leu Gly Glu Arg Ala Leu Ile Glu Asp Arg Phe
65              70              75              80
Leu Ser Thr Gly Gln Arg His Tyr Asp Gln Val Gly Tyr Pro Pro Gly
      85              90              95
Gly Gly Ser Thr Gly Thr Pro Gly Arg
      100              105

```

<210> 459
 <211> 415
 <212> DNA
 <213> Homo sapiens

<400> 459

acgcgttcat tcggcatctg cttccatgga tttcctgcgg ggaggcgcg cccagagtg
 60
 ggggtgctgaa caccgacctt cagtgatcgt ttcaaccacc ggccgagatg ggtcctgacg
 120
 ctgggcttca agccgcttgc gctcgcgctc ctgatctcgg gcagcgcgat tccgggtggt
 180
 tatgctgccg gcagacgact gcgcacgccc ctcacgaggt atctgcacat gcttaaaggg
 240
 agaggcctca cccgacagct gggcatcgga tttacgaagc ccacgacgaa tcttcctcgc
 300
 ctctcaaaag ccgatcatcg gcatgccagg tttgtggttg aatgcttcga tcaacacact
 360
 aggatcggtg gggccacca catacaccga gcggcaatcg agcggatacg acctc
 415

<210> 460

<211> 105

<212> PRT

<213> Homo sapiens

<400> 460

Met	Pro	Met	Ile	Gly	Phe	Glu	Glu	Ala	Arg	Lys	Ile	Arg	Arg	Gly	Leu
1				5					10					15	
Arg	Lys	Ser	Asp	Ala	Gln	Leu	Ser	Gly	Glu	Ala	Ser	Pro	Phe	Lys	His
			20					25					30		
Val	Gln	Ile	Pro	Arg	Glu	Gly	Arg	Ala	Gln	Ser	Ser	Ala	Gly	Ser	Ile
	35					40						45			
Asn	His	Arg	Asn	Arg	Ala	Ala	Arg	Asp	Gln	Glu	Arg	Glu	Arg	Lys	Arg
	50				55					60					
Leu	Glu	Ala	Gln	Arg	Gln	Asp	Pro	Ser	Arg	Pro	Val	Val	Glu	Thr	Ile
65				70					75				80		
Thr	Glu	Val	Ser	Cys	Ser	Thr	Pro	Ala	Leu	Ser	Ala	Ala	Pro	Pro	Arg
			85					90					95		
Arg	Lys	Ser	Met	Glu	Ala	Asp	Ala	Glu							
			100					105							

<210> 461

<211> 357

<212> DNA

<213> Homo sapiens

<400> 461

acgcgttcga ggtcggctaa atttatcatg cgcacgacaa agagagtagt ggctcacaac
 60
 cgggtcacat gcatgatgac aaaaactggc agaataagagt tgatgtcatc ccgtctacca
 120
 gctcctagaa ccagctcaga gagtcccggt gtcggtaaccg tcgagactca gtacacaact
 180
 gtcgcgatac cggacgaccc tcttcacatg gttgcagatg ggcgtctcaa tcacgtcaat
 240
 gtcgcttacg aaacctacgg gaagctcaat acgtccagcg acaatgcggt ctatacctgt
 300
 catcgctta ctggtgatgc ccatgcagcc ggatttcacc ccggtgtagt ccgtccg
 357

<210> 462
 <211> 119
 <212> PRT
 <213> Homo sapiens

<400> 462
 Thr Arg Ser Arg Ser Ala Lys Phe Ile Met Arg Thr Thr Lys Arg Val
 1 5 10 15
 Val Ala His Asn Arg Val Thr Cys Met Met Thr Lys Thr Gly Arg Ile
 20 25 30
 Glu Leu Met Ser Ser Arg Leu Pro Ala Pro Arg Thr Ser Ser Glu Ser
 35 40 45
 Pro Gly Val Gly Thr Val Glu Thr Gln Tyr Thr Thr Val Ala Ile Pro
 50 55 60
 Asp Asp Pro Leu His Leu Val Ala Asp Gly Arg Leu Asn His Val Thr
 65 70 75 80
 Val Ala Tyr Glu Thr Tyr Gly Lys Leu Asn Thr Ser Ser Asp Asn Ala
 85 90 95
 Val Tyr Thr Cys His Ala Leu Thr Gly Asp Ala His Ala Ala Gly Phe
 100 105 110
 His Pro Gly Val Val Arg Pro
 115

<210> 463
 <211> 434
 <212> DNA
 <213> Homo sapiens

<400> 463
 gtgcacgggg tatgcgaggg atgcggcatt gccaccaatg ccgctgacct gcgcagatac
 60
 gaggcagctg gtgacgatga agtgggtgca tgcgaggaat gcgacgtat cctgggtgct
 120
 accggagagt ccatctgagc ccttcttgtg gcggtgatgc cgggatatcc gtagaattag
 180
 cggtcggacg agccatccgg gtgatcgagg cagcgggtgag ttgtcgagga aagtcggggc
 240
 tccatagagc aggggtggtg gtaacgcca cccgggggtga cccgcgggaa agtgccacag
 300
 agaacagact gccggtttcg agccggtgag ggtgaaacgg tggagtaagt gccaccgcg
 360
 tcateggtga cggtgacggc atggcaaacc ccacctggag caaggccaag aagaccgtga
 420
 ggtcgcggac gcgt
 434

<210> 464
 <211> 127
 <212> PRT
 <213> Homo sapiens

<400> 464
 Met Pro Ser Pro Ser Pro Met Thr Arg Trp Ala Leu Thr Pro Pro Phe

```

      1             5             10             15
His Pro His Arg Leu Glu Thr Gly Ser Leu Phe Ser Val Ala Leu Ser
      20             25             30
Arg Gly Ser Pro Arg Val Gly Val Thr His His Pro Ala Leu Trp Ser
      35             40             45
Pro Asp Phe Pro Arg Gln Leu Thr Ala Ala Ala Ile Thr Arg Met Ala
      50             55             60
Arg Pro Thr Ala Asn Ser Thr Asp Ile Pro Ala Ser Pro Pro Gln Glu
      65             70             75             80
Gly Leu Arg Trp Thr Leu Arg Tyr Ala Pro Gly Tyr Asp Arg Ile Pro
      85             90             95
Arg Ile Ala Pro Leu His Arg His Gln Leu Pro Arg Ile Cys Ala Gly
      100             105             110
Gln Arg His Trp Trp Gln Cys Arg Ile Pro Arg Ile Pro Arg Ala
      115             120             125

```

<210> 465
 <211> 438
 <212> DNA
 <213> Homo sapiens

```

<400> 465
gatcatttag aatttatgga agaagctgat gtgaaagcta tgggtcaaatac tggcactgtg
60
gctgtattgc taccaggagc attttacacc ttgaaagaaa ctcaacttcc accgatgaat
120
ttgttacgtc agtacggagt agacattgct atttcgacgg atgctaatacc agggacgtcg
180
ccagcgttat cattacgggt aatgatgaat atggcatgta ccttgtttgg tatgacacct
240
gaaaccgccc ttgcaggggt aacaattcat gcggcaaaag cgttggggat tagcgattct
300
catggcactt tagaagttgg caaggtagct gattttgtct gctgggatgt ggaaagcccc
360
ggtgaacttt gttattgggt aggagagcag ttagtaaagc aacgtattca gcacggagta
420
tcccatgaat aatctaga
438

```

<210> 466
 <211> 143
 <212> PRT
 <213> Homo sapiens

```

<400> 466
Asp His Leu Glu Phe Met Glu Glu Ala Asp Val Lys Ala Met Val Lys
1             5             10             15
Ser Gly Thr Val Ala Val Leu Leu Pro Gly Ala Phe Tyr Thr Leu Lys
      20             25             30
Glu Thr Gln Leu Pro Pro Met Asn Leu Leu Arg Gln Tyr Gly Val Asp
      35             40             45
Ile Ala Ile Ser Thr Asp Ala Asn Pro Gly Thr Ser Pro Ala Leu Ser
      50             55             60
Leu Arg Leu Met Met Asn Met Ala Cys Thr Leu Phe Gly Met Thr Pro

```

```

65          70          75          80
Glu Thr Ala Leu Ala Gly Val Thr Ile His Ala Ala Lys Ala Leu Gly
          85          90          95
Ile Ser Asp Ser His Gly Thr Leu Glu Val Gly Lys Val Ala Asp Phe
          100          105          110
Val Cys Trp Asp Val Glu Ser Pro Gly Glu Leu Cys Tyr Trp Leu Gly
          115          120          125
Glu Gln Leu Val Lys Gln Arg Ile Gln His Gly Val Ser His Glu
          130          135          140

```

<210> 467
 <211> 460
 <212> DNA
 <213> Homo sapiens

```

<400> 467
ntttccctgg ctattggcca tgtgggacac aacgttccgc ctaccccaga gcggttaagc
60
tgcattccctg caccttcttc tcccaccgct tcaaagccac agtgaggaac ttcggagctt
120
ctcgcagtga agatggcggt ggaggaatgg atgccctggc tagaagaggc ggaatatctg
180
ttgattgtgt ggaccgacca caaaaacctg gagtatctcc acacaacca gtgcctcaac
240
tccaggcaag caagaagggc ccagctgttt acctggttcc acttttccct ctcctaccgg
300
ccgggggtcca agaacatcag gctggatgcc ctttcttgcc actttatggg catgggcccc
360
ttcctccagg cttgcctgtc acccgggctc cegtcaaacc ctggccttcg tgcgacaaca
420
ctcttggtgc cttctatggt tctgtatggt gccgcaattg
460

```

<210> 468
 <211> 118
 <212> PRT
 <213> Homo sapiens

```

<400> 468
Gly Thr Ser Glu Leu Leu Ala Val Lys Met Ala Leu Glu Glu Trp Met
1          5          10          15
Pro Trp Leu Glu Glu Ala Glu Tyr Leu Leu Ile Val Trp Thr Asp His
20          25          30
Lys Asn Leu Glu Tyr Leu His Thr Thr Lys Cys Leu Asn Ser Arg Gln
35          40          45
Ala Arg Arg Ala Gln Leu Phe Thr Trp Phe His Phe Ser Leu Ser Tyr
50          55          60
Arg Pro Gly Ser Lys Asn Ile Arg Leu Asp Ala Leu Ser Cys His Phe
65          70          75          80
Met Gly Met Gly Pro Phe Leu Gln Ala Cys Leu Ser Pro Gly Leu Pro
85          90          95
Ser Asn Pro Gly Leu Arg Ala Thr Thr Leu Leu Val Pro Ser Met Val
100          105          110
Leu Tyr Val Ala Ala Ile

```

115

<210> 469
 <211> 381
 <212> DNA
 <213> Homo sapiens

<400> 469
 cttgtgcaca cgttatTTTT ccaatacaaa tagtttaaaa agtaaactcc aaatacctat
 60
 aagccccctc aaagcacctt ccaaatatga accttgtaa tgcccaaggt ccagaggggt
 120
 cccccagaaa ggcccaggag cctggggcat gggaaagctg tcgggggtccc catgctgact
 180
 ccctggactc caagcgatat tccataaagc cagggcctcc tggctgcggg agggaggcct
 240
 tgacccaaaa tccattcggc cctggatact ggagaggcag aggcctctgc tgatgagaag
 300
 ccctgagttc ctggctagct gtggttaacc acaaaaaatg cgggggggtga tgattttcga
 360
 agtccatcgg caaagaaaga c
 381

<210> 470
 <211> 110
 <212> PRT
 <213> Homo sapiens

<400> 470
 Met Asp Phe Glu Asn His His Pro Pro His Phe Leu Trp Leu Thr Thr
 1 5 10 15
 Ala Ser Gln Glu Leu Arg Ala Ser His Gln Gln Arg Pro Leu Pro Leu
 20 25 30
 Gln Tyr Pro Gly Pro Asn Gly Phe Trp Val Lys Ala Ser Leu Pro Gln
 35 40 45
 Pro Gly Gly Pro Gly Phe Met Glu Tyr Arg Leu Glu Ser Arg Glu Ser
 50 55 60
 Ala Trp Gly Pro Arg Gln Leu Ser His Ala Pro Gly Ser Trp Ala Phe
 65 70 75 80
 Leu Gly Asp Pro Ser Gly Pro Trp Ala Leu Thr Arg Phe Ile Phe Gly
 85 90 95
 Arg Cys Phe Glu Gly Ala Tyr Arg Tyr Leu Glu Phe Thr Phe
 100 105 110

<210> 471
 <211> 378
 <212> DNA
 <213> Homo sapiens

<400> 471
 accggtgact acctgcagca ctggattgac atgggtaaaa agggcggcga ccgcatgccca
 60
 gaggtcttcc tgggttaactg gttccgccgc ggcgacgatg gccgcttctt gtggccgngg
 120

cttggcgaaa acttcccggg cctanagtgg atcatcgacc gcattgaagg caacgtagag
 180
 gccgaggaca cgggtggtcgg acgcaccgcc cgcgccgagg acatcgactt gcaaggcctt
 240
 gacttcgatg tcgacgacgt tcgcgccgca ctgcgcgttg acccgaagga atgggaaggc
 300
 gatatgcaag acaacgccga gtacctgaac ttcttgggct cccgcgtgcc cgaggaagtg
 360
 tggaaccagt tccgcgcc
 378

<210> 472

<211> 126

<212> PRT

<213> Homo sapiens

<400> 472

Thr	Gly	Asp	Tyr	Leu	Gln	His	Trp	Ile	Asp	Met	Gly	Lys	Lys	Gly	Gly
1				5				10						15	
Asp	Arg	Met	Pro	Glu	Val	Phe	Leu	Val	Asn	Trp	Phe	Arg	Arg	Gly	Asp
			20					25					30		
Asp	Gly	Arg	Phe	Leu	Trp	Pro	Xaa	Leu	Gly	Glu	Asn	Phe	Pro	Val	Leu
		35					40					45			
Xaa	Trp	Ile	Ile	Asp	Arg	Ile	Glu	Gly	Asn	Val	Glu	Ala	Glu	Asp	Thr
	50					55					60				
Val	Val	Gly	Arg	Thr	Ala	Arg	Ala	Glu	Asp	Ile	Asp	Leu	Gln	Gly	Leu
65				70				75						80	
Asp	Phe	Asp	Val	Asp	Asp	Val	Arg	Ala	Ala	Leu	Ala	Val	Asp	Pro	Lys
			85					90					95		
Glu	Trp	Glu	Gly	Asp	Met	Gln	Asp	Asn	Ala	Glu	Tyr	Leu	Asn	Phe	Leu
			100					105					110		
Gly	Ser	Arg	Val	Pro	Glu	Glu	Val	Trp	Asn	Gln	Phe	Arg	Ala		
			115					120					125		

<210> 473

<211> 339

<212> DNA

<213> Homo sapiens

<400> 473

accggttggt gggggaaggg acccatccca tgccacctgt cctagaaaat gtttcccctt
 60
 gttgagcagc tgctggatct agggctgctg ggtctaagtc caaaaaggga aaaaggaaaa
 120
 aggcaccaag taaaagaagg gggaagctgc caaaaccccc cctgccaaaa ctctcccacc
 180
 ctgttccat ttcctctctc agggaacagg tgtacctccc ctctccctg tctctctcag
 240
 atgccccagg ggctctctac ttcattcctg ccgaccctgc caggagtggc ctcaggggta
 300
 gaggctccta gttggagaat ttgcttgacg gaagggtgaa
 339

<210> 474

<211> 97
 <212> PRT
 <213> Homo sapiens

<400> 474
 Met Phe Pro Leu Val Glu Gln Leu Leu Asp Leu Gly Leu Leu Gly Leu
 1 5 10 15
 Ser Pro Lys Arg Glu Lys Gly Lys Arg His Gln Val Lys Glu Gly Gly
 20 25 30
 Ser Cys Gln Asn Pro Pro Cys Gln Asn Ser Pro Thr Leu Leu Pro Phe
 35 40 45
 Pro Ser Pro Gly Asn Arg Cys Thr Ser Pro Pro Pro Cys Pro Pro Gln
 50 55 60
 Met Pro Gln Gly Leu Ser Thr Ser Phe Leu Pro Thr Leu Pro Gly Val
 65 70 75 80
 Ala Ser Gly Val Glu Ala Pro Ser Trp Arg Ile Cys Leu Gln Glu Gly
 85 90 95
 Glu

<210> 475
 <211> 345
 <212> DNA
 <213> Homo sapiens

<400> 475
 acgcgtgaag ggtccctcc aaactctgag cctccttcca agccttgetg ggagctcccc
 60
 agcgctgcc ggagaggcct ctctccagg cgggcttccc gcgccgatgt gaaggagagg
 120
 ctgccccaga ggggtctgga tcgtaatcca gaaagggaca gtcccacagc cataatcccc
 180
 aatgctggga ctcttcagta aaggaagaga tggctttttc gttcatctgc ctttctgaaa
 240
 ggtaaaatat ctccagatcc gggctctctg ggcgactgcg tatgtggggg tccctgaagc
 300
 ctttgatgga tcttggtaga agtgggttgt tcatcttggg gtttt
 345

<210> 476
 <211> 111
 <212> PRT
 <213> Homo sapiens

<400> 476
 Met Asn Asn Pro Leu Leu Thr Arg Ser Ile Lys Gly Phe Arg Asp Pro
 1 5 10 15
 His Ile Arg Ser Arg Pro Glu Ser Pro Asp Leu Glu Ile Phe Tyr Leu
 20 25 30
 Ser Glu Arg Gln Met Asn Glu Lys Ala Ile Ser Ser Phe Thr Glu Glu
 35 40 45
 Ser Gln His Ser Gly Leu Trp Leu Trp Asp Cys Pro Phe Leu Asp Tyr
 50 55 60
 Asp Pro Asp Pro Ser Gly Ala Ala Ser Pro Ser His Arg Arg Gly Lys


```

65              70              75              80
Pro Ala Trp Arg Arg Gly Leu Ser Gly Arg Arg Trp Gly Ala Pro Ser
              85              90              95
Lys Ala Trp Lys Glu Ala Gln Ser Leu Glu Gly Thr Leu His Ala
              100              105              110

```

<210> 477
 <211> 422
 <212> DNA
 <213> Homo sapiens

```

<400> 477
acgcgtggcc gagccagcgt gctcaaggaa atgggtcaacg gcactcttat taacggctgg
60
gactctcccc aggtggaacg ggcactggac ctgtgcatgg cgtgcaaagg gtgcgcccga
120
gattgccccca ccggaatcga catggccagc taccgcagca cggttcttga cgaaaaatac
180
cgtcaccgtc tccgccctcg ctcccacctg acgatggggc tgctgcccac gtgggaacgt
240
ttgctcaatc ggaccccagg agcgccgctg ctggctaacg cagtgccttc gatgccggtc
300
ttcgcaacgtc ttgctagatg gacagccggg gtggatcagc gtcgtcccct cccccgattc
360
cagccctcgg ccagattggc cagtccgcag gccgccccgg ttaaggagat tgtggcggat
420
cc
422

```

<210> 478
 <211> 140
 <212> PRT
 <213> Homo sapiens

```

<400> 478
Thr Arg Gly Arg Ala Ser Val Leu Lys Glu Met Val Asn Gly Thr Leu
1      5      10      15
Ile Asn Gly Trp Asp Ser Pro Glu Val Glu Arg Ala Leu Asp Leu Cys
20     25     30
Met Ala Cys Lys Gly Cys Ala Arg Asp Cys Pro Thr Gly Ile Asp Met
35     40     45
Ala Ser Tyr Arg Ser Thr Val Leu Asp Glu Lys Tyr Arg His Arg Leu
50     55     60
Arg Pro Arg Ser His Leu Thr Met Gly Leu Leu Pro Met Trp Glu Arg
65     70     75     80
Leu Leu Asn Arg Thr Pro Gly Ala Pro Ser Leu Ala Asn Ala Val Leu
85     90     95
Ser Met Pro Val Phe Ala Arg Leu Ala Arg Trp Thr Ala Gly Val Asp
100    105    110
Gln Arg Arg Pro Leu Pro Arg Phe Gln Pro Ser Ala Arg Leu Ala Ser
115    120    125
Pro Gln Ala Ala Pro Val Lys Glu Ile Val Ala Asp
130    135    140

```

<210> 479
 <211> 348
 <212> DNA
 <213> Homo sapiens

<400> 479
 cgcgtaggcca ttggccgggc gctggtgcgg caccgcgcac tggtagattgc cgatgagccg
 60
 atctcggcgt tggacatgac catccagaag cagattcttg agctgttcga gcgcctgcag
 120
 gcgcagtagc gctttgcctg cctgttcac tccacgacc tggcagcggg ggaacgcac
 180
 gccaccggg tggcgggtgat gagcgagggc aggggtggtg aaatgggtgc ccgcgacgag
 240
 atcttcgacc gcccgagca cccctacacc cgcaagctgc tggccgccgc cagccccttg
 300
 gagaaaacttg aaaacgggtg ctaccgcac cgccagggcc ccgtaccg
 348

<210> 480
 <211> 116
 <212> PRT
 <213> Homo sapiens

<400> 480
 Arg Val Ala Ile Gly Arg Ala Leu Val Arg His Pro Arg Leu Val Ile
 1 5 10 15
 Ala Asp Glu Pro Ile Ser Ala Leu Asp Met Thr Ile Gln Lys Gln Ile
 20 25 30
 Leu Glu Leu Phe Glu Arg Leu Gln Ala Gln Tyr Gly Phe Ala Cys Leu
 35 40 45
 Phe Ile Ser His Asp Leu Ala Ala Val Glu Arg Ile Ala His Arg Val
 50 55 60
 Ala Val Met Ser Glu Gly Arg Val Val Glu Met Gly Ala Arg Asp Glu
 65 70 75 80
 Ile Phe Asp Arg Pro Gln His Pro Tyr Thr Arg Lys Leu Leu Ala Ala
 85 90 95
 Ala Ser Pro Leu Glu Lys Leu Glu Asn Gly Gly Tyr Arg Ile Arg Gln
 100 105 110
 Gly Pro Val Pro
 115

<210> 481
 <211> 441
 <212> DNA
 <213> Homo sapiens

<400> 481
 aagcttctga ctgtggcatt ctccctgctt aatatgtcct caatatcccc tacttactgg
 60
 gcaaaaatcct gcttatgctt tgggactagc tcaaagacca ctcccttgga tggtagccttc
 120
 cctgccctgc cggcttgccg tggcttcctc agtgtagga ttaccatcac attgcatcat
 180

gagagcagaa gaccatctcc atgtgactgc tgccctgct cccagcaggg cccacaanca
 240
 cccagtccag gacctggctc acgctgggtg gcggatgccc aggaatgggg ctctggatct
 300
 gcctcttctc ctgcaggacc aggaaaccgc tgccctgtcc ctgccccagg aaaccctcag
 360
 taaatcccca gtcatttgag tttccctca gcgccagaga ccaataacac atctccacca
 420
 acctgaaaaa ccttcacgcg t
 441

<210> 482

<211> 120

<212> PRT

<213> Homo sapiens

<400> 482

Lys	Leu	Leu	Thr	Val	Ala	Phe	Ser	Leu	Leu	Asn	Met	Ser	Ser	Ile	Ser
1				5					10					15	
Pro	Thr	Tyr	Trp	Ala	Lys	Ser	Cys	Leu	Cys	Phe	Gly	Thr	Ser	Ser	Lys
			20					25					30		
Thr	Thr	Pro	Leu	Asp	Gly	Ala	Phe	Pro	Ala	Leu	Pro	Ala	Cys	Ala	Gly
		35				40						45			
Phe	Leu	Ser	Val	Arg	Ile	Thr	Ile	Thr	Leu	His	His	Glu	Ser	Arg	Arg
	50				55					60					
Pro	Ser	Pro	Cys	Asp	Cys	Pro	Cys	Ser	Gln	Gln	Gly	Pro	Gln	Xaa	
65				70					75				80		
Pro	Ser	Pro	Gly	Pro	Gly	Ser	Arg	Trp	Val	Ala	Asp	Ala	Gln	Glu	Trp
			85					90					95		
Gly	Ser	Gly	Ser	Ala	Ser	Ser	Pro	Ala	Gly	Pro	Gly	Asn	Arg	Cys	Pro
			100					105					110		
Val	Pro	Ala	Pro	Gly	Asn	Pro	Gln								
		115					120								

<210> 483

<211> 330

<212> DNA

<213> Homo sapiens

<400> 483

acgcgttcat tccctgatgg ccacgcacga gctaacggag ggatggggcg aaggggaaggc
 60
 caagggttgcc tcgaagacca aggagtgtgc agggcaggac ctcgttttta aggaatatcc
 120
 tctcaccaga gacacgcggc ggccaggcag ggccggagcg gggcctgtgc ccagggtccg
 180
 agcgtctgcc cagcccagca tccctgtccc cagccaggaa tatgtcttcg tggcatagag
 240
 ggagctcttg gagccacacc tgcggtgtgca catgtgtcac cccactgctg ggaggggctc
 300
 tcccgggacc ctgcagcgtg ggctgggccc
 330

<210> 484

<211> 96
 <212> PRT
 <213> Homo sapiens

<400> 484
 Met Gly Arg Arg Glu Gly Gln Gly Cys Leu Glu Asp Gln Gly Val Cys
 1 5 10 15
 Arg Ala Gly Pro Arg Phe Lys Gly Ile Ser Ser His Gln Arg His Ala
 20 25 30
 Ala Ala Arg Gln Gly Arg Ser Gly Ala Cys Ala Gln Ala Pro Ser Val
 35 40 45
 Cys Pro Ala Gln His Pro Cys Pro Gln Pro Gly Ile Cys Leu Arg Gly
 50 55 60
 Ile Glu Gly Ala Leu Gly Ala Thr Pro Ala Cys Ala His Val Ser Pro
 65 70 75 80
 His Cys Trp Glu Gly Leu Ser Arg Asp Pro Ala Ala Trp Ala Gly Pro
 85 90 95

<210> 485
 <211> 377
 <212> DNA
 <213> Homo sapiens

<400> 485
 acgcgtgctc gcgcggacga agtcggcgct gatcgcccag tcatgcgccc tgcccgtgcc
 60
 gccagtttcg gcgatcgccg cattcggccg gccggaatcg agaaggaatg cgtggacgta
 120
 cgggggatac caaaggaatc ttgtcgaggg cttcgcgggc ctcgacgtgg atcacctgta
 180
 cccgacggac gtggggaagc cgtcccga gtcacggga ctccgcgaca tcgatgtgcg
 240
 atacgatttg caccgtcgtc ggctgctg gcgacacatg ctccgcgac gcctcagcgg
 300
 tggtttcga cgtcagcagg aacgtggcga cgggtggcat ggcggtcgcc gttatgtcgg
 360
 cattccatt cctcggg
 377

<210> 486
 <211> 111
 <212> PRT
 <213> Homo sapiens

<400> 486
 Met Arg Pro Ala Arg Ala Ala Gln Phe Gly Asp Arg Arg Ile Arg Pro
 1 5 10 15
 Ala Gly Ile Glu Lys Glu Cys Val Asp Val Arg Gly Ile Pro Lys Glu
 20 25 30
 Ser Cys Arg Gly Leu Arg Gly Pro Arg Arg Gly Ser Pro Val Pro Asp
 35 40 45
 Gly Arg Gly Glu Ala Val Pro Gln Ala His Gly Thr Pro Arg His Arg
 50 55 60
 Cys Ala Ile Arg Phe Ala Pro Ser Ser Ala Ala Cys Ala Thr His Ala

```

65          70          75          80
Pro Arg Ser Pro Gln Arg Trp Phe Pro Thr Ser Ala Gly Thr Trp Arg
          85          90          95
Arg Val Ala Trp Arg Ser Pro Leu Cys Arg His Ser His Ser Ser
          100          105          110

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<210> 487
 <211> 459
 <212> DNA
 <213> Homo sapiens

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<400> 487
nnacgcgtaa gatcgattgt ggatcagcac cgatgctggt cccccgacg ttgttggtgg
60
cgggtggtgt tgtaaggagt gtgtgtgatg cgtgttggtg ttcctactga ggtaagaat
120
agtgaatttc gtgtggctgt gacgcggcg ggtgttcatt cggttggttg tcgtggctcat
180
gaggtggttg ttcaggctgg tgctggtgtg ggttcgggta ttccggattc ggattttgtg
240
ggtgctggtg cgcgggttgt gggatgatgt gagtcggtgt ggggtgatgc tgatttggtg
300
ttgaaggtga aggagcctgt tgcggaggag tatgggcggt tgcattgagg tttggttctt
360
tttacgtatc ttcatttggt tgctgatgag gcgttgactc gtgagctttt ggggcgtggg
420
gtgacgtcga ttgcgtatga gacggtggag ttggccgat
459

```

<210> 488
 <211> 124
 <212> PRT
 <213> Homo sapiens

```

<400> 488
Met Arg Val Gly Val Pro Thr Glu Val Lys Asn Ser Glu Phe Arg Val
1          5          10          15
Ala Val Thr Pro Ala Gly Val His Ala Leu Val Gly Arg Gly His Glu
          20          25          30
Val Leu Val Gln Ala Gly Ala Gly Val Gly Ser Gly Ile Pro Asp Ser
          35          40          45
Asp Phe Val Gly Ala Gly Ala Arg Val Val Gly Asp Val Glu Ser Val
          50          55          60
Trp Gly Asp Ala Asp Leu Val Leu Lys Val Lys Glu Pro Val Ala Glu
65          70          75          80
Glu Tyr Gly Arg Leu His Glu Gly Leu Val Leu Phe Thr Tyr Leu His
          85          90          95
Leu Ala Ala Asp Glu Ala Leu Thr Arg Glu Leu Leu Gly Arg Gly Val
          100          105          110
Thr Ser Ile Ala Tyr Glu Thr Val Glu Leu Ala Asp
          115          120

```

<210> 489
 <211> 542

<212> DNA

<213> Homo sapiens

<400> 489

nacgcgtttg gcgtactgag tgcgggtggtg gatggcgacg acagtggcaa gccgctgctc
 60
 aaccagcacg gttgctacaa agtgcgcttt ccatttaccc gcgatcaaaa gccagcact
 120
 cgggggttcg catggctgcg caggggtgctg ttgtctgccg gttccagcca tggcatgcac
 180
 tttccgctgc tcaaaggcag tgaagtgttg gtgtcatttc tggggggcga ccccgaccgg
 240
 ccgattatcg ttggctgcgt accaaactcg gaaaccccga gcatggctcg tgagcgtaac
 300
 gccacccaga gcggcttctc caccggccga gggcacttcc tggcgatgga agaccacccc
 360
 ggggctgccc atctgaagct ggggtgcgct ggcggaaca gcgtcttcac actgggcaat
 420
 ggcaaagtgc ccggcgcgca actgcgcacc aacgcccac atgcaattga catcgtcttc
 480
 gctcaaacac gaagtgcccg gcgtgtactc attgtcgatg ggcaccgggg acccgcggcg
 540
 cg
 542

<210> 490

<211> 180

<212> PRT

<213> Homo sapiens

<400> 490

Xaa Ala Phe Gly Val Leu Ser Ala Val Val Asp Gly Asp Asp Ser Gly
 1 5 10 15
 Lys Pro Leu Leu Asn Gln His Gly Cys Tyr Lys Val Arg Phe Pro Phe
 20 25 30
 Thr Arg Asp Gln Lys Pro Ser Thr Arg Gly Ser Ala Trp Leu Arg Arg
 35 40 45
 Val Ser Leu Ser Ala Gly Ser Ser His Gly Met His Phe Pro Leu Leu
 50 55 60
 Lys Gly Ser Glu Val Leu Val Ser Phe Leu Gly Gly Asp Pro Asp Arg
 65 70 75 80
 Pro Ile Ile Val Gly Cys Val Pro Asn Ser Glu Thr Pro Ser Met Val
 85 90 95
 Val Glu Arg Asn Ala Thr Gln Ser Gly Phe Ser Thr Ala Gly Gly His
 100 105 110
 Phe Leu Ala Met Glu Asp His Pro Gly Ala Ala His Leu Lys Leu Gly
 115 120 125
 Ala Pro Gly Gly Asn Ser Val Phe Thr Leu Gly Asn Gly Lys Val Ala
 130 135 140
 Gly Ala Gln Leu Arg Thr Asn Ala Pro His Ala Ile Asp Ile Val Phe
 145 150 155 160
 Ala Gln Thr Arg Ser Ala Arg Arg Val Leu Ile Val Asp Gly His Arg
 165 170 175
 Gly Pro Gly Gly

180

<210> 491
 <211> 825
 <212> DNA
 <213> Homo sapiens

<400> 491
 nacgcgtcga ggcgacggtc ggcgccgtca tggcgactgt tctcgagggc acatgggaac
 60
 gcatcgggtgc cggattccgg actgccttaa ccacagcctt ggaacgcacc gatgaatggg
 120
 tgggcggccc tgacagcaag cccctcaacg aagtcgagac actgcgccgg tgcgccgatg
 180
 aactcatcgg cgggcccgtc ggcgcgggtg ccgcgatgca cggagggtca atcgaattgg
 240
 tcgacgtgtc ggtcgggtgac gaagagcgca gtagtcgacgt caccatgaag ggagcatgcc
 300
 gaggttgccc ggcagccatc agaccctaca tcagcgctg gaacatcaac tgagtctgcg
 360
 nattgcgcga gccggtcacc gtgcgggaaa tctgacacct actccgacag ctccacctcg
 420
 acgagcacct ccacgacgag gccaaagccac tcgtagacgc attcctcttc ggcatccaat
 480
 tcctcccggg ccgcccgagc gacttcgtcg gcagtaacct ggtcgatgat ccctagcctg
 540
 gcgcccatca tgccacgcag cgcattgaca gtacgaagcc aacgttgctg catcacaggg
 600
 ttcattggaga tacagccggt tcggtgcaac gtctccacat cagcacttaa ggactgagcg
 660
 tcttcccagc ggcgcgcgac atcctcggcg tcatggtcga catggaattg cgcgtcagct
 720
 gagtgcgtgt cagcataggc gctgggcagg atcaatcgac gcacctcgtc gtcctcctgg
 780
 agtcagaaaa actggctctc ccaaaaagcg aacgggtccc cctcc
 825

<210> 492
 <211> 58
 <212> PRT
 <213> Homo sapiens

<400> 492
 Met Asn Gly Trp Ala Ala Leu Thr Ala Ser Pro Ser Thr Lys Ser Arg
 1 5 10 15
 His Cys Ala Gly Ala Pro Met Asn Ser Ser Ala Gly Pro Ser Ala Arg
 20 25 30
 Leu Pro Arg Cys Thr Glu Gly Gln Ser Asn Trp Ser Thr Cys Arg Ser
 35 40 45
 Val Thr Lys Ser Ala Glu Ser Thr Ser Pro
 50 55

<210> 493
 <211> 863

<212> DNA

<213> Homo sapiens

<400> 493

```

naccggttcc aacctcgtca aaacggctat cgcaggaaat gaccccaact ggggtcgcac
60
cctcgcggcg atcggatgtg ttcctgagaa tatagctccc ttcgatcccg accaggtgga
120
tgtgtccatc aatgacattc agatctgtaa ggccgggggt atcggggagg accgcaacct
180
cgtcgatatg aggccacgag aggttcacat cgatattgag ctgcatgcgg gtgatgccga
240
agctgcggta tggactaatg atctgaccca ccaatacgtc gaagagaata gcgcgtatac
300
atcatgaccc ttgctcttga catccccctc aacgactccc agttctcggc tcagcggaaa
360
tctgaggtcc tggtagaagc gctgccttgg atcaggcggg ttcagggccg cactgtcgtc
420
gtgaaatatg gcggcaacgc gatggttgat cccggtctgc agcaggcctt cgccgacgac
480
attgtgttta tggcctctgt ggggattcgc cctattgtcg tccacgggtg tggccctcag
540
atcaatgcc a tgcttgcga atccgctacc ccggtggagt tccgtaatgg ttgcggggtg
600
acatctccgg aggtcatgga gggtgtccgg atggtgctcg tcgggcagggt gggccgtcag
660
ctcgtaacc gaatcaacgc ctatgcgccg ctagcagctg gcatgtcagg cgaggacttt
720
ggcctttttt cggcccgaa gtcgcggtta attgttgatg gcgagcaa atagacatgggt
780
ttagtgggag acatcgttga cgtcaacatc gatctcgta tctctatgct tgatcgcggg
840
cagattccgg tcattgcacc ggt
863

```

<210> 494

<211> 186

<212> PRT

<213> Homo sapiens

<400> 494

```

Met Thr Leu Ala Leu Asp Ile Pro Leu Asn Asp Ser Gln Phe Ser Ala
1           5           10           15
Gln Arg Lys Ser Glu Val Leu Val Glu Ala Leu Pro Trp Ile Arg Arg
20           25           30
Phe Gln Gly Arg Thr Val Val Val Lys Tyr Gly Gly Asn Ala Met Val
35           40           45
Asp Pro Gly Leu Gln Gln Ala Phe Ala Asp Asp Ile Val Phe Met Ala
50           55           60
Ser Val Gly Ile Arg Pro Ile Val Val His Gly Gly Gly Pro Gln Ile
65           70           75           80
Asn Ala Met Leu Ala Glu Ser Ala Thr Pro Val Glu Phe Arg Asn Gly
85           90           95
Leu Arg Val Thr Ser Pro Glu Val Met Glu Val Val Arg Met Val Leu

```



```

      100      105      110
Val Gly Gln Val Gly Arg Gln Leu Val Asn Arg Ile Asn Ala Tyr Ala
      115      120      125
Pro Leu Ala Ala Gly Met Ser Gly Glu Asp Phe Gly Leu Phe Ser Ala
      130      135      140
Arg Lys Ser Arg Val Ile Val Asp Gly Glu Gln Ile Asp Met Gly Leu
145      150      155      160
Val Gly Asp Ile Val Asp Val Asn Ile Asp Leu Val Ile Ser Met Leu
      165      170      175
Asp Arg Gly Gln Ile Pro Val Ile Ala Pro
      180      185

```

<210> 495
 <211> 514
 <212> DNA
 <213> Homo sapiens

```

<400> 495
gcgcgcgaca ccggtgcccc gattagcgtg ccagtgggtg acgtcactaa gggtcacgtc
60
tggaatgtga caggtgacgt tcttaacgcc ngatccctcc acaatcgagg tgacnntgag
120
cgttggccga tccaccggga tccccgggcc ttgatgacc ttgagcccga gaccgagatg
180
ctggagaccg gtattaaggt ccttgacttg ctgactcctt acgtcaaggg cggcaagatt
240
ggcctctttg gcggcgctgg tgtgggtaag acggtgctca ttcaggagat gatttacgt
300
atcgcccaca acttcggcgg tacttcggtt ttgcgcggtg tcggtgagcg taccgcgag
360
ggtaacgacc tcatcaacga gatggacgag gccggtgtgc tcaaagacac cgccctggta
420
ttcggccaga tggacgagcc cccgggcacg cggtacgagc tgtcgcgctg gcagccctgc
480
ggcccatgcc tggtaactg ctgtgggacc ttgg
514

```

<210> 496
 <211> 171
 <212> PRT
 <213> Homo sapiens

```

<400> 496
Ala Arg Asp Thr Gly Ala Pro Ile Ser Val Pro Val Gly Asp Val Thr
1      5      10      15
Lys Gly His Val Trp Asn Val Thr Gly Asp Val Leu Asn Ala Xaa Ser
      20      25      30
Leu His Asn Arg Gly Asp Xaa Glu Arg Trp Pro Ile His Arg Asp Pro
      35      40      45
Pro Ala Phe Asp Asp Leu Glu Pro Glu Thr Glu Met Leu Glu Thr Gly
      50      55      60
Ile Lys Val Leu Asp Leu Leu Thr Pro Tyr Val Lys Gly Gly Lys Ile
65      70      75      80
Gly Leu Phe Gly Gly Ala Gly Val Gly Lys Thr Val Leu Ile Gln Glu

```

```

      85              90              95
Met Ile Tyr Arg Ile Ala His Asn Phe Gly Gly Thr Ser Val Phe Ala
      100              105              110
Gly Val Gly Glu Arg Thr Arg Glu Gly Asn Asp Leu Ile Asn Glu Met
      115              120              125
Asp Glu Ala Gly Val Leu Lys Asp Thr Ala Leu Val Phe Gly Gln Met
      130              135              140
Asp Glu Pro Pro Gly Thr Arg Tyr Glu Leu Ser Arg Trp Gln Pro Cys
145              150              155              160
Gly Pro Cys Leu Val Asn Cys Cys Gly Thr Leu
      165              170

```

<210> 497
 <211> 662
 <212> DNA
 <213> Homo sapiens

```

<400> 497
acgcgtcctg ggatctcaac cccagcagtc tggcttggtt ctcattccca caatttctctg
60
ggttccacca agcagcgaaa actgccagga tgaatgagga aaaaacccag cccacaaaac
120
gagacacacg ctggcgggga gagacgcagc agagctcctt cctgtctgtg gactcggagc
180
aaagacgtgg ggccccatct tttgtgtttt cctcaagcgg ggaaagaatg gactgtttgc
240
atgcttcgtg ccacacgccc gcggtgatcc cagccagggc cccgagcgca gaggcggagc
300
tgtgtctcagc acaggcctgg gacctcccc ggagggcacc tgtggggggt gcagcccccg
360
ggaaggagggc aactgcctca cttaacatcc tccgctgcaa ggtgggtggcg ccgagagggc
420
tgtctgtgaa gacaggtacc aggatggcag gacccgcacg cctcttccca cacctgtcag
480
cttcggaagc atctctcgag gactctggtc ccaggatgtc tcccaggaca agccagtctg
540
cctcttctctc ctacttctgc tgtagcctgg gaccagacct ggccaaggtc agccagcggg
600
gagggccgag gtctgagctc tcgtcctgcc gtggcccccg cgatggcttg ggggtgcaagc
660
tt
662

```

<210> 498
 <211> 191
 <212> PRT
 <213> Homo sapiens

```

<400> 498
Met Asn Glu Glu Lys Thr Gln Pro His Lys Arg Asp Thr Arg Trp Arg
1      5      10      15
Gly Glu Thr Gln Gln Ser Ser Phe Leu Ser Val Asp Ser Glu Gln Arg
20     25     30
Arg Gly Ala Pro Ser Phe Val Phe Ser Ser Ser Gly Glu Arg Met Asp

```

```

      35              40              45
Cys Leu His Ala Ser Cys His Thr Pro Ala Val Ile Pro Ala Arg Ala
  50              55              60
Pro Ser Ala Glu Ala Glu Leu Cys Ser Ala Gln Ala Trp Asp Leu Pro
  65              70              75              80
Arg Gln Ala Pro Val Gly Gly Ala Ala Pro Gly Lys Glu Ala Thr Ala
      85              90              95
Ser Leu Asn Ile Leu Arg Cys Lys Val Val Ala Pro Arg Gly Val Ser
      100              105              110
Val Lys Thr Gly Thr Arg Met Ala Gly Pro Ala Arg Leu Phe Pro His
      115              120              125
Leu Ser Ala Ser Glu Ala Ser Leu Glu Asp Ser Gly Pro Arg Met Ser
      130              135              140
Pro Arg Thr Ser Gln Ser Ala Ser Ser Ser Tyr Phe Cys Cys Ser Leu
  145              150              155              160
Gly Pro Asp Leu Ala Lys Val Ser Gln Arg Gly Gly Pro Arg Ser Glu
      165              170              175
Leu Ser Ser Cys Arg Gly Pro Arg Asp Gly Leu Gly Cys Lys Leu
      180              185              190

```

<210> 499

<211> 444

<212> DNA

<213> Homo sapiens

<400> 499

```

acgcgtgaag ggtgggcagt gttgagctga gtgagccctc ctccttgcaa tgctggagcc
  60
ctgccttctg cctgaccctc tggcttccta agcagtctat acgtgagaag ccttttcttc
  120
aagtgaaagc ttctgagctc actacgagag cactggagct ggaacctctc tgggttcaaa
  180
tcctcaactg gggggttgga ggagggtact tcacttctca aaacctcaat ttccttatct
  240
gcaaaatggg gtaataggag cccctcttca tcaatgcttg gagggaaatgc ctggcacagt
  300
agggcagtta ccgtcatgga gaacagaaaag gccccgagct atcctggatg tggtgagaat
  360
gggtcctgga tcctgcctgc tcggcctttt cattctcttc ttcacctaca ggctcccaca
  420
aagggcctct gaaaacacag ggtg
  444

```

<210> 500

<211> 105

<212> PRT

<213> Homo sapiens

<400> 500

```

Met Thr Val Thr Ala Leu Leu Cys Gln Ala Phe Pro Pro Ser Ile Asp
  1              5              10              15
Glu Glu Gly Leu Leu Pro His Phe Ala Asp Lys Glu Ile Glu Val
      20              25              30
Leu Arg Ser Glu Val Thr Ser Ser Asn Pro Pro Val Glu Asp Leu Asn

```

```

          35          40          45
Pro Glu Arg Phe Gln Leu Gln Cys Ser Arg Ser Glu Leu Arg Ser Phe
   50          55          60
His Leu Lys Lys Gly Leu Leu Thr Tyr Arg Leu Leu Arg Lys Pro Glu
65          70          75          80
Gly Gln Ala Glu Gly Arg Ala Pro Ala Leu Gln Gly Gly Gly Leu Thr
          85          90          95
Gln Leu Asn Thr Ala His Pro Ser Arg
          100          105

```

<210> 501
 <211> 800
 <212> DNA
 <213> Homo sapiens

```

<400> 501
agatctgata cgagaagtgg ctgctcaggg aaatgactac tccatggcctt tcttaactca
60
ggtactcctt attcaatgag aggcctgagg tgagaccgcg catgcggcgc gtggatcgca
120
tggtgttagt gcacactagc aaggggctta ggtctccagc tgaggtcaga tgcacacttg
180
gaccttgtagc tggggagtaa cacacatctc tgtgttcagc gaaccatcca ggagctgttt
240
gaagtttatt ctcccatgga tgatgctggc ttcccgggtca aagctgagga gtttgtggtg
300
ctttctcagg aaccttctgt cacggaaacc attgcaccca aaattgcaag acctttcata
360
gaggccctca agagtattga gtatctggag gaggatgccc agaagtccgc acaggagggg
420
gtgctgggac cacacactga tgctctgtca tcagactctg agaacatgcc gtgtgatgaa
480
gaaccatccc aattagagga gctagctgac ttcattggagc agcttacacc aattgaaaaa
540
tatgctttaa attacctgga atcttgaggc agggcctgag agagcacgct gcgccgtact
600
tccagcagct gcggcagacc acggctccac gcctgtgtgca gttccctgag ctgaggctgg
660
tgcagttcga ctcaggtatg cggcagttgg gggcgtggcc cgtgcggggag ctgcactggc
720
cctggatgat gaggcgctct tgatgtgatt cgtttcccag ggaagttgga agcttttagct
780
atcttgcttc agaaactgaa
800

```

<210> 502
 <211> 103
 <212> PRT
 <213> Homo sapiens

```

<400> 502
Met Asp Asp Ala Gly Phe Pro Val Lys Ala Glu Glu Phe Val Val Leu
 1          5          10          15
Ser Gln Glu Pro Ser Val Thr Glu Thr Ile Ala Pro Lys Ile Ala Arg

```

```

      20      25      30
Pro Phe Ile Glu Ala Leu Lys Ser Ile Glu Tyr Leu Glu Glu Asp Ala
      35      40      45
Gln Lys Ser Ala Gln Glu Gly Val Leu Gly Pro His Thr Asp Ala Leu
      50      55      60
Ser Ser Asp Ser Glu Asn Met Pro Cys Asp Glu Glu Pro Ser Gln Leu
65      70      75      80
Glu Glu Leu Ala Asp Phe Met Glu Gln Leu Thr Pro Ile Glu Lys Tyr
      85      90      95
Ala Leu Asn Tyr Leu Glu Ser
      100

```

<210> 503
 <211> 538
 <212> DNA
 <213> Homo sapiens

```

<400> 503
nnacgcgttg tcgtctctcc gatcattgat tttgttgat tctgcaatga tgtaaaggaa
60
gatgatgaca cggagaagtt taaagaagcc attgtgaaat ttcataggct gtttgggatg
120
ccagaggaag agaaactcgt caactattac tcttcagct attggaaggg gaagggtcccc
180
cgtcagggtt ggatgtacct cagcattaac cacctttgct tttattcttt tcttatggga
240
agggaagcga aactggtcat ccggtgggta gacatcactc agcttgagaa gaatgcccc
300
ctgcttctgc ctgatgtgat caaagtgagc acacgggtcca gtgagcattt cttctctgta
360
ttcctcaaca tcaacgagac cttcaagtta atggagcagc ttgccaacat agccatgagg
420
caactcttag acaatgaggg atttgaacaa gatcgatccc tgcccaaact caaaaggaaa
480
tctcctaaaa aagtgtctgc tctaaaacgt gatcttgatg cctgggacct tcacgcgt
538

```

<210> 504
 <211> 179
 <212> PRT
 <213> Homo sapiens

```

<400> 504
Xaa Arg Val Val Val Ser Pro Ile Ile Asp Phe Val Val Phe Cys Asn
1      5      10      15
Asp Val Lys Glu Asp Asp Asp Thr Glu Lys Phe Lys Glu Ala Ile Val
      20      25      30
Lys Phe His Arg Leu Phe Gly Met Pro Glu Glu Glu Lys Leu Val Asn
      35      40      45
Tyr Tyr Ser Cys Ser Tyr Trp Lys Gly Lys Val Pro Arg Gln Gly Trp
      50      55      60
Met Tyr Leu Ser Ile Asn His Leu Cys Phe Tyr Ser Phe Leu Met Gly
65      70      75      80
Arg Glu Ala Lys Leu Val Ile Arg Trp Val Asp Ile Thr Gln Leu Glu

```

```

      85              90              95
Lys Asn Ala Pro Leu Leu Leu Pro Asp Val Ile Lys Val Ser Thr Arg
      100              105              110
Ser Ser Glu His Phe Phe Ser Val Phe Leu Asn Ile Asn Glu Thr Phe
      115              120              125
Lys Leu Met Glu Gln Leu Ala Asn Ile Ala Met Arg Gln Leu Leu Asp
      130              135              140
Asn Glu Gly Phe Glu Gln Asp Arg Ser Leu Pro Lys Leu Lys Arg Lys
      145              150              155              160
Ser Pro Lys Lys Val Ser Ala Leu Lys Arg Asp Leu Asp Ala Trp Ala
      165              170              175
Leu His Ala

```

<210> 505
 <211> 381
 <212> DNA
 <213> Homo sapiens

```

<400> 505
gtgcacgaca ccgaacggta cgaacgtatc tcccaggcac gtcgcgagga acagcaggcc
60
atgctcggct acgacngctc aagaacctgt cgcattgacct tgctcaccgg gcagctggac
120
gacccctcca cgactccttg cggacgctgc gacgtctgtg ctggcccgtg gtactcagtc
180
gaggtcgatc agtcagccgc tgtgagagcc gtccaatccc tcaaccgggt gggagtccg
240
gtggaaccac gcgcccctg gcccgagggt atggacgccc tccaggttgc gctcaagggt
300
cgcattcagtg ccgaggagat cgctgcagag ggccgcgtca tcgccagact ctccgatctg
360
ggttggggag gggcgctgcg c
381

```

<210> 506
 <211> 127
 <212> PRT
 <213> Homo sapiens

```

<400> 506
Val His Asp Thr Glu Arg Tyr Glu Arg Ile Ser Gln Ala Arg Arg Glu
1      5      10      15
Glu Gln Gln Ala Met Leu Gly Tyr Asp Xaa Ser Arg Thr Cys Arg Met
20     25     30
Thr Leu Leu Thr Gly Gln Leu Asp Asp Pro Ser Thr Thr Pro Cys Gly
35     40     45
Arg Cys Asp Val Cys Ala Gly Pro Trp Tyr Ser Val Glu Val Asp Gln
50     55     60
Ser Ala Ala Val Arg Ala Val Gln Ser Leu Asn Arg Val Gly Val Pro
65     70     75     80
Val Glu Pro Arg Ala Ala Trp Pro Ala Gly Met Asp Ala Leu Gln Val
85     90     95
Ala Leu Lys Gly Arg Ile Ser Ala Glu Glu Ile Ala Ala Glu Gly Arg

```

	100		105		110									
Val	Ile	Ala	Arg	Leu	Ser	Asp	Leu	Gly	Trp	Gly	Gly	Ala	Leu	Arg
	115			120								125		

<210> 507
 <211> 499
 <212> DNA
 <213> Homo sapiens

<400> 507
 gccggcggtgt tcaacctcat ggtgtggggcc ttcattaccg acgtcatcga tgcccaggag
 60
 gtcattgtccg gggagcgtga agacggtgtc atctatggcg tgaactcctt cgcccgcaaa
 120
 cttgcccagg ccattgccgg tggaatcggc ggagccatgc tgacgatgat cggctaccag
 180
 tcctctctccc aaggtgggtgc cgttcagtcg gagtccgctg tcaatcacct gtacacgctc
 240
 gccaccgcca tcccagcagat ctgctgcctc ggcgctgccc tgctcatgct gggctaccgc
 300
 ctcaccgcgc acaaggtggt cgccaacgcc gacgagttgg ctcgtcgcca cgcagtacag
 360
 gccgagcaaa actcctgacc cataacggag gcacatcatg gacacgctca tgcggatcac
 420
 cgaccacttg acaacctcgc cgggtatcca attgaaaatt gacaagcgat ggggtgcctc
 480
 cgtcacattt gtgacgcgt
 499

<210> 508
 <211> 125
 <212> PRT
 <213> Homo sapiens

<400> 508
 Ala Gly Val Phe Asn Leu Met Val Trp Ala Phe Ile Thr Asp Val Ile
 1 5 10 15
 Asp Ala Gln Glu Val Met Ser Gly Glu Arg Glu Asp Gly Val Ile Tyr
 20 25 30
 Gly Val Asn Ser Phe Ala Arg Lys Leu Ala Gln Ala Ile Ala Gly Gly
 35 40 45
 Ile Gly Gly Ala Met Leu Thr Met Ile Gly Tyr Gln Ser Ser Ser Gln
 50 55 60
 Gly Gly Ala Val Gln Ser Glu Ser Val Val Asn His Leu Tyr Thr Leu
 65 70 75 80
 Ala Thr Ala Ile Pro Thr Ile Cys Cys Leu Gly Ala Ala Leu Leu Met
 85 90 95
 Leu Gly Tyr Pro Leu Thr Arg Asp Lys Val Val Ala Asn Ala Asp Glu
 100 105 110
 Leu Ala Arg Arg His Ala Val Gln Ala Glu Gln Asn Ser
 115 120 125

<210> 509
 <211> 360

<212> DNA

<213> Homo sapiens

<400> 509

```

ttggccatgg atttggtcgc caagttcagt cccaaagatg tcacgtctta tctaattggac
60
ttcgggacca atggtgtggc accactaggc caattaccac aggtggccga caccttgctt
120
ttggatcata cggagaagat tgccaagttt gtacgcatca tggagcggga gctcaaccgg
180
cgtaagaagc tcttgtccga ctacggtggt ggtacactag agctctaccg tcaggctagc
240
ggtcagcaag agccggccat cgtcatcctg ctggacagtt atgagtccat gaaggaagag
300
gcctatgaag cggagctctt cacgctcttg gtgcggatct cccgggaagg tctcagcatc
360

```

<210> 510

<211> 120

<212> PRT

<213> Homo sapiens

<400> 510

```

Leu Ala Met Asp Leu Ala Arg Lys Phe Ser Pro Lys Asp Val Thr Leu
1      5      10      15
Tyr Leu Met Asp Phe Gly Thr Asn Gly Val Ala Pro Leu Gly Gln Leu
20     25     30
Pro Gln Val Ala Asp Thr Leu Leu Asp His Thr Glu Lys Ile Ala
35     40     45
Lys Phe Val Arg Ile Met Glu Arg Glu Leu Asn Arg Arg Lys Lys Leu
50     55     60
Leu Ser Asp Tyr Gly Val Gly Thr Leu Glu Leu Tyr Arg Gln Ala Ser
65     70     75     80
Gly Gln Gln Glu Pro Ala Ile Val Ile Leu Leu Asp Ser Tyr Glu Ser
85     90     95
Met Lys Glu Glu Ala Tyr Glu Ala Glu Leu Phe Thr Leu Leu Val Arg
100    105    110
Ile Ser Arg Glu Gly Leu Ser Ile
115    120

```

<210> 511

<211> 361

<212> DNA

<213> Homo sapiens

<400> 511

```

ntcgcgaacc gcggctatgc ggtgctccag cccaatttcc gcggatcggg cggttatggc
60
actgcgttcg gcgatgccgg catcgccagc atcgggcgca agatgcagga cgatctcgac
120
gacgggatgg actggctggt caaggagggc atcgtcgaca agggccgggt gtgcatcgtc
180
ggggcctcct atggcggcta tgccgcgatg tggggcgcca tccgcaatcc cgaacgctat
240

```


cgctgcgcgg cgagcctggc gggggttgcc gattaaggcc atgctcaaataaaccggcg
 300
 ctatctcgac aaggaggcgg gcaagcgctg gccgccccgn tcaaccggcg aaccgaatt
 360
 c
 361

<210> 512
 <211> 91
 <212> PRT
 <213> Homo sapiens

<400> 512
 Xaa Ala Asn Arg Gly Tyr Ala Val Leu Gln Pro Asn Phe Arg Gly Ser
 1 5 10 15
 Gly Gly Tyr Gly Thr Ala Phe Gly Asp Ala Gly Ile Gly Gln Ile Gly
 20 25 30
 Arg Lys Met Gln Asp Asp Leu Asp Asp Gly Met Asp Trp Leu Val Lys
 35 40 45
 Glu Gly Ile Val Asp Lys Gly Arg Val Cys Ile Val Gly Ala Ser Tyr
 50 55 60
 Gly Gly Tyr Ala Ala Met Trp Gly Ala Ile Arg Asn Pro Glu Arg Tyr
 65 70 75 80
 Arg Cys Ala Ala Ser Leu Ala Gly Val Ala Asp
 85 90

<210> 513
 <211> 369
 <212> DNA
 <213> Homo sapiens

<400> 513
 nnatgcagac tagaagatgg catgacgggt ttggctggcg gtttcgggct atgcggcatt
 60
 ccagaaaatc tgattcaaga gatcaaacga cgccagactt gtgatttgac catagtgtca
 120
 aataactgtg gtgtagatgg ttttggttta ggggttttgc tagaagataa gcaagtacgc
 180
 aaaatggtgt cttcttatgt ggggtgaaaat gcactgtttg agaagcaatt attacaaggt
 240
 gagttggaag tcgagctcac tcctcaaggc actcttgccg aaaaactacg cgctggcggc
 300
 gcgggaattc ctgccttttt cacagcaacg ggtgtaggta cacctattgg tgagggtaaa
 360
 gacacgcgt
 369

<210> 514
 <211> 123
 <212> PRT
 <213> Homo sapiens

<400> 514
 Xaa Cys Arg Leu Glu Asp Gly Met Thr Val Leu Ala Gly Gly Phe Gly

```

      1             5             10             15
Leu Cys Gly Ile Pro Glu Asn Leu Ile Gln Glu Ile Lys Arg Arg Gln
      20             25             30
Thr Cys Asp Leu Thr Ile Val Ser Asn Asn Cys Gly Val Asp Gly Phe
      35             40             45
Gly Leu Gly Val Leu Leu Glu Asp Lys Gln Val Arg Lys Met Val Ser
      50             55             60
Ser Tyr Val Gly Glu Asn Ala Leu Phe Glu Lys Gln Leu Leu Gln Gly
      65             70             75             80
Glu Leu Glu Val Glu Leu Thr Pro Gln Gly Thr Leu Ala Glu Lys Leu
      85             90             95
Arg Ala Gly Gly Ala Gly Ile Pro Ala Phe Phe Thr Ala Thr Gly Val
      100             105             110
Gly Thr Pro Ile Gly Glu Gly Lys Asp Thr Arg
      115             120

```

<210> 515

<211> 387

<212> DNA

<213> Homo sapiens

<400> 515

```

gcgtagggacg agaaggccgc cggcaactgc gcgatcgact acgggttcca ccagatcctc
60
tccgacgtgc aggactcgtc gctgaccgcg atggacgagc tgatcaccga gggcgtgaca
120
tccttcaagc tcttcgtggc ctacaagggc gtcttcctct cggacgacgg gcagatcctg
180
cgggcggttc agaaggccgc cgacaacggc gcgatgatga tgatgcacgc cgagaacggc
240
gcatcatcg acgtgctcgt gcagcaggcg ctcgaggccg ggaagaccac cccgtactac
300
cacggcatca gccggccgtg gcaggccgag gaggaggcca cccaccgcgc gatcatgatc
360
gccgacctga ccggtgcgcc gttgtac
387

```

<210> 516

<211> 129

<212> PRT

<213> Homo sapiens

<400> 516

```

Ala Trp Asp Glu Lys Ala Ala Gly Asn Cys Ala Ile Asp Tyr Gly Phe
1             5             10             15
His Gln Ile Leu Ser Asp Val Gln Asp Ser Ser Leu Thr Ala Met Asp
      20             25             30
Glu Leu Ile Thr Glu Gly Val Thr Ser Phe Lys Leu Phe Val Ala Tyr
      35             40             45
Lys Gly Val Phe Leu Ser Asp Asp Gly Gln Ile Leu Arg Ala Phe Gln
      50             55             60
Lys Gly Ala Asp Asn Gly Ala Met Met Met Met His Ala Glu Asn Gly
      65             70             75             80
Ala Ile Ile Asp Val Leu Val Gln Gln Ala Leu Glu Ala Gly Lys Thr

```

```

      85              90              95
Thr Pro Tyr Tyr His Gly Ile Ser Arg Pro Trp Gln Ala Glu Glu Glu
      100              105              110
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<210> 517
 <211> 377
 <212> DNA
 <213> Homo sapiens

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<210> 518
 <211> 118
 <212> PRT
 <213> Homo sapiens

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      20              25              30
Ser Pro Gly Glu Ala Gln Gly Pro Leu Leu Pro Ser Pro Ala Arg Gly
      35              40              45
Leu Lys Phe Leu Lys Leu Pro Pro Thr Ser Glu Lys Ser Pro Ser Pro
      50              55              60
Gly Gly Pro Gln Leu Ser Pro Gln Leu Pro Arg Asn Ser Arg Ile Pro
65              70              75              80
Cys Arg Asn Ser Gly Ser Asp Gly Ser Pro Ser Pro Leu Leu Ala Arg
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Arg Gly Leu Gly Gly Gly Glu Leu Ser Pro Glu Gly Ala Gln Gly Leu
      100              105              110
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      115

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<210> 519
 <211> 311

<212> DNA

<213> Homo sapiens

<400> 519

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<211> 92

<212> PRT

<213> Homo sapiens

<400> 520

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		20					25					30			
Asn	Phe	Leu	Gly	Lys	His	Asp	Leu	Pro	Lys	Leu	Thr	Leu	Glu	Lys	Asn
		35				40					45				
Arg	Tyr	Thr	Ser	Val	Thr	Thr	Glu	Val	Glu	Lys	Val	Val	Asn	Ile	Leu
	50				55					60					
Pro	Asn	Leu	Glu	Phe	Met	Ile	Glu	Phe	Phe	Glu	Ile	Tyr	Cys	Glu	Tyr
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<211> 352

<212> DNA

<213> Homo sapiens

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 35 40 45
 Val Ile Arg Ala Leu Met Leu Leu Arg Leu Ser Thr Leu Cys Thr Gly
 50 55 60
 Arg Thr Gly Val Arg Pro Val Val Val Glu Thr Tyr Ala Lys Ala Leu
 65 70 75 80
 Asn Ala Gly Ile Val Pro Gly Val Arg Glu Tyr Gly Ser Leu Gly Cys
 85 90 95
 Ser Gly Asp Leu Ala Pro Leu Ala His Cys Ala Leu Ala Leu Leu Gly
 100 105 110
 Glu Gly Glu Val Arg
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 <212> DNA
 <213> Homo sapiens

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<210> 524
 <211> 193
 <212> PRT
 <213> Homo sapiens

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 35 40 45
 Phe Pro Leu Asp Phe Gln Val Ile Leu Ala Gly Ser Gln Arg Phe Arg
 50 55 60
 Glu Lys Phe Pro Pro Val Phe Phe Ser Ser Phe Arg Asn Thr Val Gln
 65 70 75 80
 Ser Ser Asn Asn Lys Phe Arg Arg Asn Phe Thr Met Thr Tyr His Leu
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 Ser Pro Gly Asn Tyr Val Val Val Ala Gln Thr Arg Arg Lys Ser Ala
 100 105 110
 Glu Phe Leu Leu Arg Ile Phe Leu Lys Met Pro Asp Ser Asp Arg His
 115 120 125
 Leu Ser Ser His Phe Asn Leu Arg Met Lys Gly Ser Pro Ser Glu His
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 Gly Ser Gln Gln Ser Ile Phe Asn Arg Tyr Ala Gln Gln Arg Leu Asp
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 Ile Asp Ala Thr Gln Leu Gln Gly Leu Leu Asn Gln Glu Leu Leu Thr
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 <213> Homo sapiens

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<211> 290

<212> PRT

<213> Homo sapiens

<400> 526

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Gly	Asp	Gln	Ile	Leu	Asp	Trp	Gln	Tyr	Gly	Val	Thr	Gln	Ala	Phe	Pro
		35				40					45				
His	Thr	Glu	Glu	Glu	Val	Glu	Val	Asp	Ser	His	Ala	Tyr	Ser	His	Arg
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Trp	Lys	Arg	Asn	Leu	Asp	Phe	Leu	Lys	Ala	Val	Asp	Thr	Asn	Arg	Ala
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Ser	Val	Gly	Gln	Asp	Ser	Leu	Glu	Pro	Arg	Ser	Phe	Thr	Asp	Leu	Leu
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Leu	Asp	Asp	Gly	Gln	Asp	Asn	Asn	Thr	Gln	Ile	Glu	Glu	Asp	Thr	Asp
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His	Asn	Tyr	Tyr	Ile	Ser	Arg	Ile	Tyr	Gly	Pro	Ser	Asp	Ser	Ala	Ser
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225		230		235	240
Gly Ser Phe Thr Phe Gln Ala Thr Leu Leu Met Asp Gly Arg Ile Ile					
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Phe Gly Tyr Lys Glu Ile Pro Val Leu Val Thr Gln Ile Ser Ser Thr					
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<213> Homo sapiens

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<211> 886

<212> PRT

<213> Homo sapiens

<400> 528

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			20					25					30		
Leu	Glu	Ala	Cys	Asp	Glu	Ser	Pro	Ala	Ser	Arg	Glu	Leu	Asp	Ile	Pro
		35					40					45			
Leu	Pro	Glu	Asp	Ser	Glu	Thr	Ala	Tyr	Asp	Trp	Glu	Tyr	Ala	Gly	Phe

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65	70	75
Val Cys Leu His Ile	Gln Thr Gln Gln Thr	Val Asn Asp Ser Leu Cys
85	90	95
Asp Met Val His Arg	Pro Pro Ala Met Ser	Gln Ala Cys Asn Thr Glu
100	105	110
Pro Cys Pro Pro Arg	Trp His Val Gly Ser	Trp Gly Pro Cys Ser Ala
115	120	125
Thr Cys Gly Val Gly	Ile Gln Thr Arg Asp	Val Tyr Cys Leu His Pro
130	135	140
Gly Glu Thr Pro Ala	Pro Pro Glu Glu Cys	Arg Asp Glu Lys Pro His
145	150	155
Ala Leu Gln Ala Cys	Asn Gln Phe Asp Cys	Pro Pro Gly Trp His Ile
165	170	175
Glu Glu Trp Gln Gln	Cys Ser Arg Thr Cys	Gly Gly Gly Thr Gln Asn
180	185	190
Arg Arg Val Thr Cys	Arg Gln Leu Leu Thr	Asp Gly Ser Phe Leu Asn
195	200	205
Leu Ser Asp Glu Leu	Cys Gln Gly Pro Lys	Ala Ser Ser His Lys Ser
210	215	220
Cys Ala Arg Thr Asp	Cys Pro Pro His Leu	Ala Val Gly Asp Trp Ser
225	230	235
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245	250	255
Cys Gln Arg Leu Ala	Ala Lys Gly Arg Arg	Ile Pro Leu Ser Glu Met
260	265	270
Met Cys Arg Asp Leu	Pro Gly Leu Pro Leu	Val Arg Ser Cys Gln Met
275	280	285
Pro Glu Cys Ser Lys	Ile Lys Ser Glu Met	Lys Thr Lys Leu Gly Glu
290	295	300
Gln Gly Pro Gln Ile	Leu Ser Val Gln Arg	Val Tyr Ile Gln Thr Arg
305	310	315
Glu Glu Lys Arg Ile	Asn Leu Thr Ile Gly	Ser Arg Ala Tyr Leu Leu
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Pro Asn Thr Ser Val	Ile Ile Lys Cys Pro	Val Arg Arg Phe Gln Lys
340	345	350
Ser Leu Ile Gln Trp	Glu Lys Asp Gly Arg	Cys Leu Gln Asn Ser Lys
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Arg Leu Gly Ile Thr	Lys Ser Gly Ser Leu	Lys Ile His Gly Leu Ala
370	375	380
Ala Pro Asp Ile Gly	Val Tyr Arg Cys Ile	Ala Gly Ser Ala Gln Glu
385	390	395
Thr Val Val Leu Lys	Leu Ile Gly Thr Asp	Asn Arg Leu Ile Ala Arg
405	410	415
Pro Ala Leu Arg Glu	Pro Met Arg Glu Tyr	Pro Gly Met Asp His Ser
420	425	430
Glu Ala Asn Ser Leu	Gly Val Thr Trp His	Lys Met Arg Gln Met Trp
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Asn Asn Lys Asn Asp	Leu Tyr Leu Asp Asp	Asp His Ile Ser Asn Gln
450	455	460
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<210> 529
<211> 4566
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<212> DNA

<213> Homo sapiens

<400> 529

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<211> 802

<212> PRT

<213> Homo sapiens

<400> 530

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Glu Leu Lys Arg Ala Gly Pro Arg Arg Arg Ala Ser Pro Glu Gly Cys
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      65           70           75           80
Pro Arg Asp Arg Asn Phe Leu Phe Val Gly Val Met Thr Ala Gln Lys
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Tyr Leu Gln Thr Arg Ala Val Ala Ala Tyr Arg Thr Trp Ser Lys Thr
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      130           135           140
Pro Gln Lys Lys Ser Phe Met Met Leu Lys Tyr Met His Asp His Tyr
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Leu Asp Lys Tyr Glu Trp Phe Met Arg Ala Asp Asp Asp Val Tyr Ile
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Lys Gly Asp Arg Leu Glu Asn Phe Leu Arg Ser Leu Asn Ser Ser Glu
      180           185           190
Pro Leu Phe Leu Gly Gln Thr Gly Leu Gly Thr Thr Glu Glu Met Gly
      195           200           205
Lys Leu Ala Leu Glu Pro Gly Glu Asn Phe Cys Met Gly Gly Pro Gly
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Val Ile Met Ser Arg Glu Val Leu Arg Arg Met Val Pro His Ile Gly
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Lys Cys Leu Arg Glu Met Tyr Thr Thr His Glu Asp Val Glu Val Gly
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      260           265           270
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      275           280           285
Ile Arg Asp Leu His Asn Ser Lys Ile His Gln Ala Ile Thr Leu His
      290           295           300
Pro Asn Lys Asn Pro Pro Tyr Gln Tyr Arg Leu His Ser Tyr Met Leu
      305           310           315           320
Ser Arg Lys Ile Ser Glu Leu Arg His Arg Thr Ile Gln Leu His Arg
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Glu Ile Val Leu Met Ser Lys Tyr Ser Asn Thr Glu Ile His Lys Glu
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Asp Leu Gln Leu Gly Ile Pro Pro Ser Phe Met Arg Phe Gln Pro Arg
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 500 505 510
 Lys Leu Val Pro Phe Gln Leu Pro Gly Ser Lys Ser Glu His Lys Glu
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 Pro Asn Gln Asn Val Lys Leu Val Val Leu Leu Phe Asn Ser Asp Ser
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 690 695 700
 Arg Val Gly Gly Phe Asp Val Ser Ile Gln Gly Trp Gly Leu Glu Asp
 705 710 715 720
 Val Asp Leu Phe Asn Lys Val Val Gln Ala Gly Leu Lys Thr Phe Arg
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 740 745 750
 Pro Asn Leu Asp Pro Lys Gln Tyr Lys Met Cys Leu Gly Ser Lys Ala
 755 760 765
 Ser Thr Tyr Gly Ser Thr Gln Gln Leu Ala Glu Met Trp Leu Glu Lys
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<210> 531

<211> 321

<212> DNA

<213> Homo sapiens

<400> 531

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<210> 532

<211> 96

<212> PRT

<213> Homo sapiens

<400> 532

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		20					25					30			
Ser	Val	Lys	Arg	Cys	Arg	Thr	Ser	Val	Ser	Asn	Ala	Pro	Glu	Val	Asn
		35				40					45				
Pro	Arg	Gly	Arg	Leu	Asn	Gln	Ala	Ser	Trp	Ala	Trp	Asp	Asp	Ser	Gly
	50				55				60						
Cys	Ser	Gly	Ser	Asn	Gly	Ala	Cys	Gly	Ser	Ala	Leu	Ile	Asp	Ser	Arg
65				70					75				80		
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<211> 335

<212> DNA

<213> Homo sapiens

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 35 40 45
 Lys Val Thr Leu Thr Asn Ile Asp Asn Val Leu Asn Lys Asp His Leu
 50 55 60
 Arg Trp Leu His Phe Leu Glu Gly Arg Leu Glu Pro Asn Val Arg
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 <213> Homo sapiens

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      35              40              45
Val Pro Ala Leu Trp Val Tyr Pro Val Ala Val Ala Val Gly Ile Leu
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Met Thr Arg Pro Arg Arg Leu Leu Leu Gly Ser Ile Val Val Leu Gly
      65              70              75              80
Pro Leu Leu Val Ile Ser Pro Trp Ile Pro Arg Leu Ile Thr Glu Pro
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 <212> DNA
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35     40     45
Asp Ile Glu Asp Thr Gly Gly Ile Asp Arg Leu Phe Lys Leu Ile Glu
50     55     60
Gln Arg Ala Gly His Trp Leu Ala Met Glu Val Glu Glu Thr Lys Ile
65     70     75     80
Gln Leu Thr His Gln Asp Ser Arg His Val Pro Leu Asp Arg Ile Glu
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115

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 <211> 143
 <212> PRT
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 35 40 45
 Gly Asp Thr Ser Asn Ile Ile Thr Val Arg Val Ala Asp Gly Gln Thr
 50 55 60
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 Ile Ser Gln Glu Leu Ala Glu Ser Thr Val Ile Ala Lys Val Asn Gly
 85 90 95
 Glu Leu Trp Asp Leu Asp Arg Pro Leu Glu Gly Asp Ser Ser Leu Glu
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<210> 541
 <211> 551

<212> DNA

<213> Homo sapiens

<400> 541

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<210> 542

<211> 168

<212> PRT

<213> Homo sapiens

<400> 542

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Gly Thr Pro Glu Asn Ser Ala Pro Val Glu Ser Glu Pro Ser Gln Trp
20     25     30
Ala Cys Lys Val Cys Ser Ala Thr Phe Leu Glu Leu Gln Leu Leu Asn
35     40     45
Gly Lys Glu Asp Val Trp Gly Ala Pro Val Val Lys Leu Leu Cys Arg
50     55     60
Phe Leu Ser Asp Leu Arg Cys His Leu Ser Ala Ala Val Gly Gly Val
65     70     75     80
Pro Asp Phe Val Leu Ser Ala Pro Leu Pro His Asn Val Val Ala Arg
85     90     95
Thr Lys Ala Phe Ser Gly Phe Lys Ala Ser Gly Gln Ser Arg Phe Pro
100    105    110
Pro Pro Thr Pro Ala Gly Leu Thr Pro His Ser Ser Trp Leu Gly Ser
115    120    125
Cys Ile Ser Ala Gly Arg Leu Asp Ser Gly Ala Leu Ala Gly Ala Arg
130    135    140
Gly Gln Glu Pro Ala Val Ala Cys Val Val His Ser Cys Leu Cys Cys
145    150    155    160
Leu Tyr Leu Thr Ala Pro Ser Arg
165

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<210> 543

<211> 349

<212> DNA

<213> Homo sapiens

<400> 543

mnaaagccgg acatgaatac ccgcattgct ggcaaaactg tcctgaccat cattctggcc
 60
 ggggggcaaag gcagccgcct ggccccgatg accgatcagg tggccaaacc agccgtgccg
 120
 tttatgggga cgtaccgcct gattgacttt tcgctgtcca acattgtcca cagcggcttg
 180
 caggacgtct ggatcattga gcaaaacctg ccccatagct taaacgagca cctggctggg
 240
 gggcgctcct gggatctgga ccgcaccgcg ggtggcctga aggtcatgcc gcccttttcc
 300
 ggccctgccg atgaggacgg tggcttttcc gaaggcaacg cacacgcgt
 349

<210> 544

<211> 116

<212> PRT

<213> Homo sapiens

<400> 544

Xaa Lys Pro Asp Met Asn Thr Arg Ile Ala Gly Lys Thr Val Leu Thr
 1 5 10 15
 Ile Ile Leu Ala Gly Gly Lys Gly Ser Arg Leu Ala Pro Met Thr Asp
 20 25 30
 Gln Val Ala Lys Pro Ala Val Pro Phe Met Gly Thr Tyr Arg Leu Ile
 35 40 45
 Asp Phe Ser Leu Ser Asn Ile Val His Ser Gly Leu Gln Asp Val Trp
 50 55 60
 Ile Ile Glu Gln Asn Leu Pro His Ser Leu Asn Glu His Leu Ala Gly
 65 70 75 80
 Gly Arg Ser Trp Asp Leu Asp Arg Thr Arg Gly Gly Leu Lys Val Met
 85 90 95
 Pro Pro Phe Ser Gly Pro Ala Asp Glu Asp Gly Gly Phe Ser Glu Gly
 100 105 110
 Asn Ala His Ala
 115

<210> 545

<211> 390

<212> DNA

<213> Homo sapiens

<400> 545

catgatgcaa aaacagacat gcttatttca aaatataaaa gtgaaaaaga tcgttttagca
 60
 caagaaattg ttgggtgcat cacaggttct gcaatgccgg gtggttcagc aaaccgtatc
 120
 ccaaataaag caggctcaaa tccagaaggt tctattgcaa cgcgttttat tgcagaaaca
 180

atgtataacg aactcaaaac agtggattta actattcaaa atgctggcgg tgtacgcgca
 240
 gatattttac cggggaatgt aacctttaac gatgcttata ctttcttacc tttcgggaat
 300
 acgttatata cctataaaat ggaaagtcca ttagtgaaac aagtgcctga agatgcaatg
 360
 ctatttgctt tgggtcccc ccccccccc
 390

<210> 546
 <211> 130
 <212> PRT
 <213> Homo sapiens

<400> 546
 His Asp Ala Lys Thr Asp Met Leu Ile Ser Lys Tyr Lys Ser Glu Lys
 1 5 10 15
 Asp Arg Leu Ala Gln Glu Ile Val Gly Val Ile Thr Gly Ser Ala Met
 20 25 30
 Pro Gly Gly Ser Ala Asn Arg Ile Pro Asn Lys Ala Gly Ser Asn Pro
 35 40 45
 Glu Gly Ser Ile Ala Thr Arg Phe Ile Ala Glu Thr Met Tyr Asn Glu
 50 55 60
 Leu Lys Thr Val Asp Leu Thr Ile Gln Asn Ala Gly Gly Val Arg Ala
 65 70 75 80
 Asp Ile Leu Pro Gly Asn Val Thr Phe Asn Asp Ala Tyr Thr Phe Leu
 85 90 95
 Pro Phe Gly Asn Thr Leu Tyr Thr Tyr Lys Met Glu Ser Ser Leu Val
 100 105 110
 Lys Gln Val Leu Glu Asp Ala Met Leu Phe Ala Leu Gly Pro Pro Pro
 115 120 125
 Pro Pro
 130

<210> 547
 <211> 306
 <212> DNA
 <213> Homo sapiens

<400> 547
 aagcttggtt ttctgatttt tattcaaatc tctatcatgg atgaagcatg cagtttcaga
 60
 atcagttcag tgttgacaac atatcaagat attctgcagt caatctcaat gtatgttcac
 120
 gaagcctcca acatattttg tgggatacca tctttgtcag gcattgtgct aggcactgtc
 180
 cctgcagtga ataagaaaga caggatttct gtatttatgg ggcttagtac caagttgttc
 240
 tcaaaactttc atgtttgtgt atacaaatca gctgaggcct tcactaaact cnnnnncenn
 300
 nncenn
 306

<210> 548

<211> 90
 <212> PRT
 <213> Homo sapiens

<400> 548
 Met Asp Glu Ala Cys Ser Phe Arg Ile Ser Ser Val Leu Thr Thr Tyr
 1 5 10 15
 Gln Asp Ile Leu Gln Ser Ile Ser Met Tyr Val His Glu Ala Ser Asn
 20 25 30
 Ile Phe Cys Gly Ile Pro Ser Leu Ser Gly Ile Val Leu Gly Thr Val
 35 40 45
 Pro Ala Val Asn Lys Lys Asp Arg Ile Ser Val Phe Met Gly Leu Ser
 50 55 60
 Thr Lys Leu Phe Ser Asn Phe His Val Cys Val Tyr Lys Ser Ala Glu
 65 70 75 80
 Ala Phe Thr Lys Leu Xaa Xaa Xaa Xaa
 85 90

<210> 549
 <211> 780
 <212> DNA
 <213> Homo sapiens

<400> 549
 nnacgcgtac ttccaacacc tatgctccag tatggaggac gggtaaagtc tcttgtaaat
 60
 gttttaatca tacacatatt gtctgtaagt atgaagagaa aggcatatca gaaatatttc
 120
 aattcagcga tttgaaatgt ttactttctg tttattgaaa atttttgttc tttttcacca
 180
 tggtattttt ttctcctcgt gtagaatcgg acagtagcaa caccgagcca tggagtatgg
 240
 gacatgcgag ggaaacaatt ccacacagga gttgaaatca aaatgtgggc tatcgcttgt
 300
 tttgccacac agaggcagtg cagagaagaa atattgaagg gtttcacaga ccagctgcgt
 360
 aagatttcta aggatgcagg gatgcccatc cagggccagc catgcttctg caaatatgca
 420
 cagggggcag acagcgtaga gcccatgttc cggcatctca agaacacata ttctggccta
 480
 cagcttatta tcgtcatcct gccggggaag acaccagtgt atgcggaagt gaaacgtgta
 540
 ggagacacac ttttgggtat ggctacacaa tgtgttcaag tcaagaatgt aataaaaaa
 600
 tctctcaaaa ctctgtcaaa cttgtgccta aagataaatg ttaaaactcg aggatcaat
 660
 aatattcttg tacctcatca aagaccttct gtgttccagc aaccagtgat ctttttggga
 720
 gccgatgtca ctcatccacc tgctgggtgat ggaaagaagc cttctattgc tgctgttgta
 780

<210> 550
 <211> 192
 <212> PRT

<213> Homo sapiens

<400> 550

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Asn Arg Thr Val Ala Thr Pro Ser His Gly Val Trp Asp Met Arg Gly
 1           5           10           15
Lys Gln Phe His Thr Gly Val Glu Ile Lys Met Trp Ala Ile Ala Cys
          20           25           30
Phe Ala Thr Gln Arg Gln Cys Arg Glu Glu Ile Leu Lys Gly Phe Thr
          35           40           45
Asp Gln Leu Arg Lys Ile Ser Lys Asp Ala Gly Met Pro Ile Gln Gly
          50           55           60
Gln Pro Cys Phe Cys Lys Tyr Ala Gln Gly Ala Asp Ser Val Glu Pro
65           70           75           80
Met Phe Arg His Leu Lys Asn Thr Tyr Ser Gly Leu Gln Leu Ile Ile
          85           90           95
Val Ile Leu Pro Gly Lys Thr Pro Val Tyr Ala Glu Val Lys Arg Val
          100          105          110
Gly Asp Thr Leu Leu Gly Met Ala Thr Gln Cys Val Gln Val Lys Asn
          115          120          125
Val Ile Lys Thr Ser Pro Gln Thr Leu Ser Asn Leu Cys Leu Lys Ile
          130          135          140
Asn Val Lys Leu Gly Gly Ile Asn Asn Ile Leu Val Pro His Gln Arg
145          150          155          160
Pro Ser Val Phe Gln Gln Pro Val Ile Phe Leu Gly Ala Asp Val Thr
          165          170          175
His Pro Pro Ala Gly Asp Gly Lys Lys Pro Ser Ile Ala Ala Val Val
          180          185          190

```

<210> 551

<211> 291

<212> DNA

<213> Homo sapiens

<400> 551

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nnggatccgg attatggggc tattgctaac aggtcaacgg ccatcaaggt gctcgttgcc
60
gtggcaccgc cagccccgga gcctactcgc gagccaccga cgaactccgc tccttccgag
120
gaaccgtcct cgtcgtcaat cgcaccgggc ccgccggccc cgacgactgc agtaccacg
180
actagttcgt cgtcggggccg ctgaccgatg cgcccatcgg cgggctcatc tggctggcgc
240
tagcgggggc ttcgatgtcc ccataccaca gcgtccgcta aattgccnc c
291

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<210> 552

<211> 67

<212> PRT

<213> Homo sapiens

<400> 552

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Xaa Asp Pro Asp Tyr Gly Ala Ile Ala Asn Arg Ser Thr Ala Ile Lys
 1           5           10           15
Val Leu Val Ala Val Ala Pro Pro Ala Pro Glu Pro Thr Arg Glu Pro

```

```

                20                25                30
Pro Thr Asn Ser Ala Pro Ser Glu Glu Pro Ser Ser Ser Ser Ile Ala
                35                40                45
Pro Val Pro Pro Ala Pro Thr Thr Ala Val Pro Thr Thr Ser Ser Ser
                50                55                60
Ser Gly Arg
65

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<210> 553
 <211> 471
 <212> DNA
 <213> Homo sapiens

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<400> 553
ctagccgatg taggattagt aggttttccg agcgtgggta aatctacctt actctcaata
60
gtatctaaag ccaaaccgaa aattggtgca tatcatttca ctacaattaa acctaactta
120
ggtgttgttt ccacaaaaga tcaacgtagt tttgttatgg cagatttacc aggtttaatt
180
gaaggtgcat ctgatggcgt tggattagga catcaatttt taagacatgt agagagaaca
240
aaagttattg ttcacatgat tgatatgagc ggttctgaag gtagagaacc tattgaagat
300
tataaagtca ttaatcaaga attagctgcg tacgagcaac gtttagaaga tagacctcaa
360
atcgtagtag ctaacaagat ggatttacct gaatcacaag ataatttaaa cttgtttaaa
420
gaagaaattg gcgaagatgt gccagttatt ccagtttcaa caataacgcg t
471

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<210> 554
 <211> 157
 <212> PRT
 <213> Homo sapiens

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<400> 554
Leu Ala Asp Val Gly Leu Val Gly Phe Pro Ser Val Gly Lys Ser Thr
 1          5          10          15
Leu Leu Ser Ile Val Ser Lys Ala Lys Pro Lys Ile Gly Ala Tyr His
 20          25          30
Phe Thr Thr Ile Lys Pro Asn Leu Gly Val Val Ser Thr Lys Asp Gln
 35          40          45
Arg Ser Phe Val Met Ala Asp Leu Pro Gly Leu Ile Glu Gly Ala Ser
 50          55          60
Asp Gly Val Gly Leu Gly His Gln Phe Leu Arg His Val Glu Arg Thr
 65          70          75          80
Lys Val Ile Val His Met Ile Asp Met Ser Gly Ser Glu Gly Arg Glu
 85          90          95
Pro Ile Glu Asp Tyr Lys Val Ile Asn Gln Glu Leu Ala Ala Tyr Glu
100          105          110
Gln Arg Leu Glu Asp Arg Pro Gln Ile Val Val Ala Asn Lys Met Asp
115          120          125
Leu Pro Glu Ser Gln Asp Asn Leu Asn Leu Phe Lys Glu Glu Ile Gly

```

130 135 140
 Glu Asp Val Pro Val Ile Pro Val Ser Thr Ile Thr Arg
 145 150 155

<210> 555
 <211> 300
 <212> DNA
 <213> Homo sapiens

<400> 555
 tctagagatt gagaacaatt atggatacag aaatgggtga ttccgtcaaa tatattcgag
 60
 attcgggaatc atgtgaggct cgcgtgctgg agatcttagc cagaaggccg tccatgatgg
 120
 tgcagatctt gcgtggcgac ggcttaatta acgaagacca gagattagtc agattatggc
 180
 ttaataaagt acctagaatt gttcgctgc ttctccggt tagtggttc gtcgctgcgg
 240
 caataggtgc ccgtgcggta tgggcggcgg cttccggtaa tcccgatctt gttcacgcgt
 300

<210> 556
 <211> 93
 <212> PRT
 <213> Homo sapiens

<400> 556
 Met Asp Thr Glu Met Val Asp Ser Val Lys Tyr Ile Arg Asp Ser Glu
 1 5 10 15
 Ser Cys Glu Ala Arg Val Leu Glu Ile Leu Ala Arg Arg Pro Ser Met
 20 25 30
 Met Val Gln Ile Leu Arg Gly Asp Gly Leu Ile Asn Glu Asp Gln Arg
 35 40 45
 Leu Val Arg Leu Trp Leu Asn Lys Val Pro Arg Ile Val Arg Leu Leu
 50 55 60
 Leu Arg Leu Ser Val Phe Val Ala Ala Ala Ile Gly Ala Arg Ala Val
 65 70 75 80
 Trp Ala Ala Ala Ser Gly Asn Pro Asp Leu Val His Ala
 85 90

<210> 557
 <211> 678
 <212> DNA
 <213> Homo sapiens

<400> 557
 atcttcccgg tttatgagga gaatgcgctg cgtgtcgagt ttttcggcga cgaaattgag
 60
 gccctcacga cgaatgcaccc gctcaccggg gaggtcatca gcgaggacga gcagggtctac
 120
 gtgttcccgg ctaccacta tgtcgccggc ccggaacgta tggagcgggc catagcgtcc
 180
 atccagcagg agctcgagga gcgcctggcc gttctagagc gtgatgggaa actgttggag
 240

gcccaacggt tacgtatgcg tactacctac gatatcgaga tgatgcagca ggctcggtgcc
 300
 tgtgtctggca tcgaaaacta ttccgcgccac atcgacggac gcgctcccg ctcagccccg
 360
 aactgtctgc ttgactactt tccggaagat tttgtgtctg tcattgatga atccccagtg
 420
 accgtcccg agattggcgg gatgtatgag ggggacatga gccgcaagcg gacattggta
 480
 gaacatgggt tccgactgcc cagcgcgatg gacaaccgtc ctctcaaatt cgacgagttc
 540
 acccagcgga tcggccagac tgtctacctg tccgccacgc ccggttcgta cgagaccgaa
 600
 cgagctcacg gcgtcgtcga acaaatcatt cgtccgacag gtctggtgga tccggagatt
 660
 atcgtcaagc ctacgcgt
 678

<210> 558

<211> 226

<212> PRT

<213> Homo sapiens

<400> 558

Ile	Phe	Pro	Val	Tyr	Glu	Glu	Asn	Ala	Leu	Arg	Val	Glu	Phe	Phe	Gly
1				5					10					15	
Asp	Glu	Ile	Glu	Ala	Leu	Thr	Thr	Met	His	Pro	Leu	Thr	Gly	Glu	Val
			20					25					30		
Ile	Ser	Glu	Asp	Glu	Gln	Val	Tyr	Val	Phe	Pro	Ala	Thr	His	Tyr	Val
			35				40					45			
Ala	Gly	Pro	Glu	Arg	Met	Glu	Arg	Ala	Ile	Ala	Ser	Ile	Gln	Gln	Glu
			50				55				60				
Leu	Glu	Glu	Arg	Leu	Ala	Val	Leu	Glu	Arg	Asp	Gly	Lys	Leu	Leu	Glu
65					70					75				80	
Ala	Gln	Arg	Leu	Arg	Met	Arg	Thr	Thr	Tyr	Asp	Ile	Glu	Met	Met	Gln
				85					90					95	
Gln	Val	Gly	Ala	Cys	Ala	Gly	Ile	Glu	Asn	Tyr	Ser	Arg	His	Ile	Asp
			100					105					110		
Gly	Arg	Ala	Pro	Gly	Ser	Ala	Pro	Asn	Cys	Leu	Leu	Asp	Tyr	Phe	Pro
			115				120					125			
Glu	Asp	Phe	Val	Leu	Val	Ile	Asp	Glu	Ser	His	Val	Thr	Val	Pro	Gln
			130				135					140			
Ile	Gly	Gly	Met	Tyr	Glu	Gly	Asp	Met	Ser	Arg	Lys	Arg	Thr	Leu	Val
145					150					155				160	
Glu	His	Gly	Phe	Arg	Leu	Pro	Ser	Ala	Met	Asp	Asn	Arg	Pro	Leu	Lys
				165					170					175	
Phe	Asp	Glu	Phe	Thr	Gln	Arg	Ile	Gly	Gln	Thr	Val	Tyr	Leu	Ser	Ala
			180					185					190		
Thr	Pro	Gly	Ser	Tyr	Glu	Thr	Glu	Arg	Ala	His	Gly	Val	Val	Glu	Gln
			195				200					205			
Ile	Ile	Arg	Pro	Thr	Gly	Leu	Val	Asp	Pro	Glu	Ile	Ile	Val	Lys	Pro
			210				215					220			
Thr	Arg														
225															

<210> 559
 <211> 335
 <212> DNA
 <213> Homo sapiens

<400> 559
 ggatcctatg gagctcaagt tcaagaaaag aaactgtaaa catggagggt ttgtgataaa
 60
 tggaatgcag tcagagggaa ggaactgccn gcttaaagtg tcctatgctg cgctttccag
 120
 agcaatacag tacacagtgg agggcgctac catggagtct ctgggtgaaa gttaggatgg
 180
 tatggtggca ccagccaaac ttctcagggt tcataggcag acagcagctc tggagtggaa
 240
 ctaaagtgtg tccaggagct gaagccctta atcagctagg gctcacacag agtcaaggta
 300
 gggtcacaaa cattcagtct gggacatat ctaga
 335

<210> 560
 <211> 92
 <212> PRT
 <213> Homo sapiens

<400> 560
 Met Glu Cys Ser Gln Arg Glu Gly Thr Ala Xaa Leu Lys Cys Pro Met
 1 5 10 15
 Leu Arg Phe Pro Glu Gln Tyr Ser Thr Gln Trp Arg Ala Leu Pro Trp
 20 25 30
 Ser Leu Trp Val Lys Val Arg Met Val Trp Trp His Gln Pro Asn Phe
 35 40 45
 Ser Gly Phe Ile Gly Arg Gln Gln Leu Trp Ser Gly Thr Lys Val Tyr
 50 55 60
 Pro Gly Ala Glu Ala Leu Asn Gln Leu Gly Leu Thr Gln Ser Gln Gly
 65 70 75 80
 Arg Val Lys Asn Ile Gln Ser Gly Thr Ile Ser Arg
 85 90

<210> 561
 <211> 477
 <212> DNA
 <213> Homo sapiens

<400> 561
 ngcgcgcccc ctctccgat ggcgggcgag atccagccca agcctctgac ccgcaagccg
 60
 atcctgctgc agcggatgga ggggtcccag gaggtggtga atatggccgt gatcgtgccc
 120
 aaagaggagg gcgtcatcag cgtctccgag gacaggacag ttcgtgtttg gttaaagaga
 180
 gacagtggac agtattggcc aagcgtatac catgcaatgc cttgagttta tattgtcaga
 240
 agattataac aagatgactc ctgtgaaaaa ctatcaagcg catcagagca gagtgcagat
 300

gatcctgttt gtcctggagc tggagtgggt gctgagcaca ggacaggaca agcaatttgc
 360
 ctggcactgc tctgagagtg ggcagcgcct gggaggttat cggaccagtg ctgtggcctc
 420
 aggccctgcaa tttgatgttg aaaccgggca tgtgtttatc ggtgaccact caggcca
 477

<210> 562
 <211> 74
 <212> PRT
 <213> Homo sapiens

<400> 562
 Xaa Ala Pro Pro Pro Met Ala Ala Glu Ile Gln Pro Lys Pro Leu
 1 5 10 15
 Thr Arg Lys Pro Ile Leu Leu Gln Arg Met Glu Gly Ser Gln Glu Val
 20 25 30
 Val Asn Met Ala Val Ile Val Pro Lys Glu Glu Gly Val Ile Ser Val
 35 40 45
 Ser Glu Asp Arg Thr Val Arg Val Trp Leu Lys Arg Asp Ser Gly Gln
 50 55 60
 Tyr Trp Pro Ser Val Tyr His Ala Met Pro
 65 70

<210> 563
 <211> 403
 <212> DNA
 <213> Homo sapiens

<400> 563
 ccatggcaga cagggagctg agcggcctgc ggaccaggt gcaccagagc atggtgcccc
 60
 tgctcctaca cctgaaggac caatgcccaa ctgtcgccac gggcaatgcc caccccaaga
 120
 aaaggaaggg aaaaggcctc aaccttggcc agggctggaa cccacaggag gccagggtac
 180
 ggggcagacg gatggcagca gcactgcctg agagtgggg gagctccac ggggcagcaa
 240
 gtggcgggca gaggtctgg ccactcgcac tggtttctgt gaccacagtt ggcctgcccc
 300
 ctccccact gcaccactga cgaagcgaga ccctgcctca aaaaaaaaaa caaaaacaaa
 360
 aacaaaaaca aaactcaaac ttcacactgg agatctgtgc aat
 403

<210> 564
 <211> 105
 <212> PRT
 <213> Homo sapiens

<400> 564
 Met Ala Asp Arg Glu Leu Ser Gly Leu Arg Thr Gln Val His Gln Ser
 1 5 10 15
 Met Val Pro Leu Leu Leu His Leu Lys Asp Gln Cys Pro Thr Val Ala


```

      20      25      30
Thr Gly Asn Ala His Pro Lys Lys Arg Lys Gly Lys Gly Leu Asn Leu
      35      40      45
Gly Gln Gly Trp Asn Pro Gln Glu Ala Arg Val Arg Gly Arg Arg Met
      50      55      60
Ala Ala Ala Leu Pro Glu Ser Trp Gly Ser Ser His Gly Ala Ala Ser
      65      70      75      80
Gly Gly Gln Arg Val Trp Pro Ser Ala Leu Val Ser Val Thr Thr Val
      85      90      95
Gly Leu Pro Ala Pro Pro Leu His His
      100      105

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<210> 565

<211> 311

<212> DNA

<213> Homo sapiens

<400> 565

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ncctctccat ggagcagccc catcttcact cttcacctgg ggccaggcct tccacagcag
60
ccaccacca gcgaccacag agaggctgcg cggaggacac aggagagagg gagcccacgg
120
gcacgatctc caccggcttt cccagctccc tgggtcagcc ccacgggacc tctcctctc
180
tctccacat ctccaagcca gccttgcata tagtaagagc tgtgatcagg atggaaagag
240
gcttggggcgg cacagacctg gacaatgtcc cagtgagggc tggaggtgct agaagggcac
300
aggaggcccc n
311

```

<210> 566

<211> 101

<212> PRT

<213> Homo sapiens

<400> 566

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Met Glu Gln Pro His Leu His Ser Ser Pro Gly Ala Arg Pro Ser Thr
1      5      10      15
Ala Ala Thr Thr Gln Arg Pro Gln Arg Gly Cys Ala Glu Asp Thr Gly
      20      25      30
Glu Arg Glu Pro Thr Gly Thr Ile Ser Thr Gly Phe Pro Ser Ser Leu
      35      40      45
Gly Gln Pro His Gly Thr Ser Pro Pro Leu Ser His Ile Ser Lys Pro
      50      55      60
Ala Leu His Ile Val Arg Ala Val Ile Arg Met Glu Arg Gly Leu Gly
      65      70      75      80
Arg Thr Asp Leu Asp Asn Val Pro Val Arg Ala Gly Gly Ala Arg Arg
      85      90      95
Ala Gln Glu Ala Pro
      100

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<210> 567

<211> 929

<212> DNA

<213> Homo sapiens

<400> 567

atcacatcgg tcgctgaacc cgcacgagcc tcacctgtgc gaaatattca tccttgagat
 60
 cagcccacgt gccgtcgacc tctacctcgg tgagggtcgc gggcgggtac caacagccga
 120
 cctcgtcctc ggctccactc atggcggcaa gttccgctgc cagtccgggg atcgtcgggg
 180
 catggggcgt gatgagcagg ttatccacat cgctcgtcgt ttctccgatg cgcgcacgca
 240
 cggtatcagt gccgcagtaa tagagggtc gcataaattc gaccggacaa tccagttgga
 300
 ggcagtccta ggtctggcgg gtgcgtaggg catcggagac cagagcatgt ccaacattgc
 360
 gcagtcctaa acgcgtgccg acctcacggg cctgacggcg cccacgctcg gtgagcggac
 420
 gctcccgtac cccgcccgga gcattgggat cgggctgtgc atgtctcatg aggaacagag
 480
 tgtgcatgga tccatcggtg cacttcgcgg tcgcgcgggt tctacgatgt tggcatgccg
 540
 ttgacggatt tgggcattga tgaggcgggt acctaccgcc cgaacgtccc tgaaccgat
 600
 ggtttcgact ctttttgggc cgagaccctc gatgagtatt ccggcgttcc ccaagatctg
 660
 acggcgggtgc ctttcgataa ccgtcagggt ctgatagata cctgggattt gtcgtgggtg
 720
 gggatcacca actctcgggt gagcgggtga ttacatgccc cagccgctgt gaacggccca
 780
 ttcccccttg tcatcgagta cctcgggtac tcgagttcgc gtgggtgtgcc gattggatca
 840
 gtcttcgctg ctgctggcta tgcacatcgc gtcgtcgtc cactgtgtca ggggtggggc
 900
 caccacacct tgacggaaaa ctgtccgga
 929

<210> 568

<211> 71

<212> PRT

<213> Homo sapiens

<400> 568

Met Pro Leu Thr Asp Leu Gly Ile Asp Glu Ala Arg Thr Tyr Arg Pro
 1 5 10 15
 Asn Val Pro Glu Pro Asp Gly Phe Asp Ser Phe Trp Ala Glu Thr Leu
 20 25 30
 Asp Glu Tyr Ser Gly Val Pro Gln Asp Leu Thr Ala Val Pro Phe Asp
 35 40 45
 Asn Arg Gln Ala Leu Ile Asp Thr Trp Asp Leu Ser Trp Val Gly Tyr
 50 55 60
 His Asn Ser Arg Val Ser Gly
 65 70

<210> 569
 <211> 371
 <212> DNA
 <213> Homo sapiens

<400> 569
 ncgcaaaactt caacgggtgcc atctgccata ttccagggat gccagatttg gatggaaaat
 60
 accatatcac tctcgattca gaattcgtac ttgatttagt ggcctttaac aaaacgctac
 120
 ctgtcgatta cttaatggtc gaaggaacgg aacttggtga ttcaaactg gaagaactac
 180
 ctgaatgccc atattatcca aaagatcaaa agccaatcgt gattgggaaa aacacaaaac
 240
 tcaaggaaca accaacagcc gttgctctct tctcggatgt tgataaacgg ccagagatta
 300
 aatcaaaaat cttagaccgc tatgataatg atattgaaat ccgtacttgg ggcgggtactt
 360
 cccatgtcta n
 371

<210> 570
 <211> 111
 <212> PRT
 <213> Homo sapiens

<400> 570
 Met Pro Asp Leu Asp Gly Lys Tyr His Ile Thr Leu Asp Ser Glu Phe
 1 5 10 15
 Val Leu Asp Leu Val Ala Phe Asn Lys Thr Leu Pro Val Asp Tyr Leu
 20 25 30
 Met Val Glu Gly Thr Glu Leu Val Tyr Ser Asn Met Glu Glu Leu Pro
 35 40 45
 Glu Cys Pro Tyr Tyr Pro Lys Asp Gln Lys Pro Ile Val Ile Gly Lys
 50 55 60
 Asn Thr Lys Leu Lys Glu Gln Pro Thr Ala Val Ala Leu Phe Ser Asp
 65 70 75 80
 Val Asp Lys Arg Pro Glu Ile Lys Ser Lys Ile Leu Asp Arg Tyr Asp
 85 90 95
 Asn Asp Ile Glu Ile Arg Thr Trp Gly Gly Thr Ser His Val Xaa
 100 105 110

<210> 571
 <211> 407
 <212> DNA
 <213> Homo sapiens

<400> 571
 nacgcgtatc ttcgctgggtc cacaccagac gtggcattaa acgacgtcac aagaacgaca
 60
 ccgggccttg acggggccac gcacgaagag gccaagacac tgaccgagac tactgtttcc
 120
 gtccccacct ccttcgccga cctcggcgtc cgagaagata tctgccaggc gctggaaggg
 180

gtgggaattg tctccccgtt cccgatccag gccatgtcga tcccgattgc cgtcgagggc
 240
 acggatctta ttgggcaggc gcgtactggc actggcaaaa cactcgcctt cggcatcacc
 300
 atcttcgagc gcatcaccct gcccggtgac gaagggtggg aagaactcac caccaaaggc
 360
 aagcccccaa gcactcgtga tgtgcccta cccgggagct aggtcgg
 407

<210> 572

<211> 100

<212> PRT

<213> Homo sapiens

<400> 572

Leu	Thr	Glu	Thr	Thr	Val	Ser	Val	Pro	Thr	Ser	Phe	Ala	Asp	Leu	Gly
1				5					10					15	
Val	Arg	Glu	Asp	Ile	Cys	Gln	Ala	Leu	Glu	Gly	Val	Gly	Ile	Val	Ser
			20					25					30		
Pro	Phe	Pro	Ile	Gln	Ala	Met	Ser	Ile	Pro	Ile	Ala	Val	Glu	Gly	Thr
		35					40					45			
Asp	Leu	Ile	Gly	Gln	Ala	Arg	Thr	Gly	Thr	Gly	Lys	Thr	Leu	Ala	Phe
	50					55				60					
Gly	Ile	Thr	Ile	Leu	Gln	Arg	Ile	Thr	Leu	Pro	Gly	Asp	Glu	Gly	Trp
65				70						75				80	
Glu	Glu	Leu	Thr	Thr	Lys	Gly	Lys	Pro	Pro	Ser	Thr	Arg	Asp	Val	Pro
			85					90						95	
Leu	Pro	Gly	Ser												
			100												

<210> 573

<211> 393

<212> DNA

<213> Homo sapiens

<400> 573

acgcgtctac cgtaggatcc atgaccttcc gcaagaccga ccaccacaag aacgccattg
 60
 actacgaggt cgccggacta atgtggctcg ctgctgcccg gccagatggg gccggcatcg
 120
 tcgaggtgct cgaccacggc aagggatggc tcaccgaacc cgaattgtcc actgggcacc
 180
 ccaccgcga ggcagccgag gactttggcc gccgactggc tcacacccac gcagccgggg
 240
 cctcacacct gggggctgca cctgacgggt ttgttcccga cgatgggtat atcgccctg
 300
 ctcctctgcc actgccgtcc gaaccaatct cctcctgggg agagttttac gctcagtgcc
 360
 gcatcgaacc atatatggac agtctcgacg ctg
 393

<210> 574

<211> 124

<212> PRT

<213> Homo sapiens

<400> 574

```

Met Thr Phe Arg Lys Thr Asp His His Lys Asn Ala Ile Asp Tyr Glu
 1             5             10             15
Val Ala Gly Leu Met Trp Leu Ala Ala Arg Pro Asp Gly Ala Gly
      20             25             30
Ile Val Glu Val Leu Asp His Gly Lys Gly Trp Leu Thr Glu Pro Glu
      35             40             45
Leu Ser Thr Gly His Pro Thr Arg Glu Ala Ala Glu Asp Phe Gly Arg
      50             55             60
Arg Leu Ala His Thr His Ala Ala Gly Ala Ser His Leu Gly Ala Ala
65             70             75             80
Pro Asp Gly Phe Val Pro Asp Asp Gly Tyr Ile Gly Arg Ala Pro Leu
      85             90             95
Pro Leu Pro Ser Glu Pro Ile Ser Ser Trp Gly Glu Phe Tyr Ala Gln
      100            105            110
Cys Arg Ile Glu Pro Tyr Met Asp Ser Leu Asp Ala
      115            120

```

<210> 575

<211> 372

<212> DNA

<213> Homo sapiens

<400> 575

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nntatccatg cagacatggg accaggggtct ctgagggcag gaagcaaagt gggtgagggg
60
gatgggacaa gatgccctgg tgctaaggcc tctggagctg gagctggtta tagggatgat
120
accaggcacc ctgagtcact cgcacctcac aatggggccg cttctgggag ccagtgggct
180
tatggggctg gcaatgtgct gggttatgag gatggatcag aacttccagg gcctcagggg
240
actgggggtca gaacagccta tggagaaagg tcaaggggcc ttgggcctag gagtacaggg
300
ccaggggggtg aggcaggctt tagagatggt tcaggaggcc tccaaggaat gggatcagca
360
gatgggcccgt gt
372

```

<210> 576

<211> 124

<212> PRT

<213> Homo sapiens

<400> 576

```

Xaa Ile His Ala Asp Met Gly Pro Gly Ser Leu Arg Ala Gly Ser Lys
 1             5             10             15
Val Gly Glu Gly Asp Gly Thr Arg Cys Pro Gly Ala Lys Ala Ser Gly
      20             25             30
Ala Gly Ala Gly Tyr Arg Asp Asp Thr Arg His Pro Glu Ser Leu Ala
      35             40             45
Pro His Asn Gly Ala Ala Ser Gly Ser Gln Trp Ala Tyr Gly Ala Gly

```

```

      50              55              60
Asn Val Leu Gly Tyr Glu Asp Gly Ser Glu Leu Pro Gly Pro Gln Gly
65              70              75              80
Thr Gly Val Arg Thr Ala Tyr Gly Glu Arg Ser Arg Gly Leu Gly Pro
      85              90              95
Arg Ser Thr Gly Pro Gly Gly Glu Ala Gly Phe Arg Asp Gly Ser Gly
      100              105              110
Gly Leu Gln Gly Met Gly Ser Ala Asp Gly Pro Gly
      115              120

```

<210> 577

<211> 432

<212> DNA

<213> Homo sapiens

<400> 577

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nagcgcaatg tcatgatgtc ggatttgtca atgtcggatt tctcatccca gccatcaccc
60
ccgcagcgcc gggcgcggtat gaccagcggc cagcgccgtg aacagctcat cagcgtggcc
120
cgtcgctctt tgcgagacaa tggcatggca gggacctcgc tcgaggagat cgccgctacc
180
gcgggagtct ccaaaccggt catctacgag catttcgggt ccaaggatgg gctgtacgcc
240
gtcgtcgtag accgcgaggt acgccaccta caagattccc tcaacgccgc catgaccgcg
300
ccaaagcaag gcccgaaaacg caccctggag tcagcggtag tggccctgct ggactacatc
360
gacgaccgtc cagacggttt tcggatcatc tcgcgagact cctcggtcgg ttcagccacc
420
ggttcgtacg cg
432

```

<210> 578

<211> 118

<212> PRT

<213> Homo sapiens

<400> 578

```

Met Thr Ser Gly Gln Arg Arg Glu Gln Leu Ile Ser Val Ala Arg Arg
 1              5              10              15
Leu Phe Ala Asp Asn Gly Met Ala Gly Thr Ser Val Glu Glu Ile Ala
      20              25              30
Ala Thr Ala Gly Val Ser Lys Pro Val Ile Tyr Glu His Phe Gly Ser
      35              40              45
Lys Asp Gly Leu Tyr Ala Val Val Val Asp Arg Glu Val Arg His Leu
      50              55              60
Gln Asp Ser Leu Asn Ala Ala Met Thr Arg Pro Lys Gln Gly Pro Lys
      65              70              75              80
Arg Thr Leu Glu Ser Ala Val Leu Ala Leu Leu Asp Tyr Ile Asp Asp
      85              90              95
Arg Pro Asp Gly Phe Arg Ile Ile Ser Arg Asp Ser Ser Val Gly Ser
      100              105              110
Ala Thr Gly Ser Tyr Ala

```

115

<210> 579

<211> 320

<212> DNA

<213> Homo sapiens

<400> 579

ggccccaac actccgacct cagctgggtcc agcatgctgg gcaccgtgct gctgctggcc
 60
 ctgctcccag ggatcaccac cttaccacgc gggccacctg ctcccccggt ccccgcggcg
 120
 cccggcccct ggctgcgag acccctcttc agcctgaagc tgtccgacac agaggacgtc
 180
 tttctcgcc ggcgggggcc gctcgaggtc cggccgaca gccgcgtgtt cgtgcaggcg
 240
 gccttgccc gtccctcccc gcgctggggc ctggccctgc accgctgctc agtgacgccg
 300
 tctcacgcc cggccccggg
 320

<210> 580

<211> 95

<212> PRT

<213> Homo sapiens

<400> 580

Met	Leu	Gly	Thr	Val	Leu	Leu	Leu	Ala	Leu	Leu	Pro	Gly	Ile	Thr	Thr
1				5					10					15	
Leu	Pro	Ser	Gly	Pro	Pro	Ala	Pro	Pro	Phe	Pro	Ala	Ala	Pro	Gly	Pro
			20					25					30		
Trp	Leu	Arg	Arg	Pro	Leu	Phe	Ser	Leu	Lys	Leu	Ser	Asp	Thr	Glu	Asp
		35				40					45				
Val	Phe	Pro	Arg	Arg	Ala	Gly	Pro	Leu	Glu	Val	Pro	Ala	Asp	Ser	Arg
	50				55					60					
Val	Phe	Val	Gln	Ala	Ala	Leu	Ala	Arg	Pro	Ser	Pro	Arg	Trp	Gly	Leu
65				70					75					80	
Ala	Leu	His	Arg	Cys	Ser	Val	Thr	Pro	Ser	Ser	Arg	Pro	Ala	Pro	
			85					90					95		

<210> 581

<211> 419

<212> DNA

<213> Homo sapiens

<400> 581

nacgacggca accattcgct gtggaaggag ctgaacggcc agctcgacgt gcagtttttc,
 60
 cacgtcggca tgggcttcaa gacgccagta cgcatgcaca gcgtcgaccc caagaccgcg
 120
 gaagcccgcg aggtgcattt cggcccgctg ctgttcaact atgccaagac cacggtggac
 180
 accaagcagc tgaccggcga cctgggtttc tccggtttca agctgttcaa ggcgccggaa
 240

ctggatcgcc atgacgtgct gtcgtttctc ggcgccagtt acttccgtgc ggtggacgca
 300
 acccgccagt acggcctctc cgcacgcggc ctggcgattg atacctacgc gaaaaaacgc
 360
 gaggaattcc ccgacttcac gcagttctgg ttcgaaaccc cgagcaagga cccacgcgt
 419

<210> 582

<211> 139

<212> PRT

<213> Homo sapiens

<400> 582

Xaa	Asp	Gly	Asn	His	Ser	Leu	Trp	Lys	Glu	Leu	Asn	Gly	Gln	Leu	Asp
1				5					10					15	
Val	Gln	Phe	Phe	His	Val	Gly	Met	Gly	Phe	Lys	Thr	Pro	Val	Arg	Met
			20					25					30		
His	Ser	Val	Asp	Pro	Lys	Thr	Arg	Glu	Ala	Arg	Glu	Val	His	Phe	Arg
		35				40					45				
Pro	Ser	Leu	Phe	Asn	Tyr	Ala	Lys	Thr	Thr	Val	Asp	Thr	Lys	Gln	Leu
		50				55				60					
Thr	Gly	Asp	Leu	Gly	Phe	Ser	Gly	Phe	Lys	Leu	Phe	Lys	Ala	Pro	Glu
65				70					75				80		
Leu	Asp	Arg	His	Asp	Val	Leu	Ser	Phe	Leu	Gly	Ala	Ser	Tyr	Phe	Arg
			85					90					95		
Ala	Val	Asp	Ala	Thr	Arg	Gln	Tyr	Gly	Leu	Ser	Ala	Arg	Gly	Leu	Ala
		100						105					110		
Ile	Asp	Thr	Tyr	Ala	Lys	Lys	Arg	Glu	Glu	Phe	Pro	Asp	Phe	Thr	Gln
		115				120						125			
Phe	Trp	Phe	Glu	Thr	Pro	Ser	Lys	Asp	Pro	Arg					
		130				135									

<210> 583

<211> 407

<212> DNA

<213> Homo sapiens

<400> 583

cttttgatca atgctgatgg cacgaagcta tcgaaaaggt cgggtgatgt ccgcgtagct
 60
 gattatatgg agcagggatg ggagccggag acgctggtga acctagttgc cctcacgggc
 120
 tatagctatg cgaatttggg gcatgctgat catgatgtca agacgatgaa cgaactcatc
 180
 cgtgactttg agcttactcg tatctcccat acgcgagcca cactcccat ggacaagctt
 240
 gtgtttttga acaagcatca cttgacaaat aagctggcgc tcgccacgac gtgtgagcag
 300
 accaaacaag acctattgtc gcgtatccgg ccgatcacta cctcgtggta cggcgattat
 360
 tcagatgatt atatcctgcg cgtcgttaaca ctgggacccc aacgcgt
 407

<210> 584

<211> 135

<212> PRT

<213> Homo sapiens

<400> 584

```

Leu Leu Ile Asn Ala Asp Gly Thr Lys Leu Ser Lys Arg Ser Gly Asp
 1             5             10             15
Val Arg Val Ala Asp Tyr Met Glu Gln Gly Trp Glu Pro Glu Thr Leu
      20             25             30
Val Asn Leu Val Ala Leu Thr Gly Tyr Ser Tyr Ala Asn Leu Glu His
      35             40             45
Ala Asp His Asp Val Lys Thr Met Asn Glu Leu Ile Arg Asp Phe Glu
      50             55             60
Leu Thr Arg Ile Ser His Thr Arg Ala Thr Leu Pro Met Asp Lys Leu
      65             70             75             80
Val Phe Leu Asn Lys His His Leu Thr Asn Lys Leu Ala Leu Ala Thr
      85             90             95
Thr Cys Glu Gln Thr Lys Gln Asp Leu Leu Ser Arg Ile Arg Pro Ile
      100            105            110
Thr Thr Ser Trp Tyr Gly Asp Tyr Ser Asp Asp Tyr Ile Leu Arg Val
      115            120            125
Val Thr Leu Gly Pro Gln Arg
      130            135

```

<210> 585

<211> 502

<212> DNA

<213> Homo sapiens

<400> 585

```

nnacgcgtcc tcgctggata tgaggctgtg aagaggggaac gctgcgtcat tgatctggac
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gatattttgt tgtgcgcggt gggattgttg gttcagcacc gtgacatcac tgaggagatt
120
cgggctcggg accgacattt cggtgtcgac gaataccagg acgtttctcc gctgcagcat
180
aggttgcttg aactgtggtt tggcgatcga aatgatgtat gcgtcgtggg agatccgcac
240
caggccattc actcttatgc aggcgcacga gctgactacc tcctcgactt cggtgccgat
300
catcctggcg ctaaacgcat cgatttggtt cgcaactacc gctccactcc cgagatcggt
360
cagttggcca atgaagttct tgtcaaccgt atgactccag aggaggcttt ggaacatggc
420
aggggagtcg cattggtttc gcggggtcga tccggteccg agcccatcta tcaggctctc
480
ggggacgatg cctccgaagc tt
502

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<210> 586

<211> 167

<212> PRT

<213> Homo sapiens

<400> 586

Xaa Arg Val Leu Ala Gly Tyr Glu Ala Val Lys Arg Glu Arg Cys Val
 1 5 10 15
 Ile Asp Leu Asp Ile Leu Leu Cys Ala Val Gly Leu Leu Val Gln
 20 25 30
 His Arg Asp Ile Thr Glu Glu Ile Arg Ala Arg Tyr Arg His Phe Val
 35 40 45
 Val Asp Glu Tyr Gln Asp Val Ser Pro Leu Gln His Arg Leu Leu Glu
 50 55 60
 Leu Trp Phe Gly Asp Arg Asn Asp Val Cys Val Val Gly Asp Pro His
 65 70 75 80
 Gln Ala Ile His Ser Tyr Ala Gly Ala Arg Ala Asp Tyr Leu Leu Asp
 85 90 95
 Phe Val Ala Asp His Pro Gly Ala Lys Arg Ile Asp Leu Val Arg Asn
 100 105 110
 Tyr Arg Ser Thr Pro Glu Ile Val Gln Leu Ala Asn Glu Val Leu Val
 115 120 125
 Asn Arg Met Thr Pro Glu Glu Ala Leu Glu His Gly Arg Gly Val Thr
 130 135 140
 Leu Val Ser Arg Gly Arg Ser Gly Pro Glu Pro Ile Tyr Gln Ala Leu
 145 150 155 160
 Gly Asp Asp Ala Ser Glu Ala
 165

<210> 587

<211> 746

<212> DNA

<213> Homo sapiens

<400> 587

gcgtcctgcc tcgagggcct cgggagcttc cgctgcctct gttggccagg ctacagcggc
 60
 gagctgtgcg aggtggacga ggacgagtgat gcatcgagcc cctgccagca tgggggcccga
 120
 tgcctgcagc gctctgaccc ggccctctac ggggggtgtcc aggccgcctt ccctggcgcc
 180
 ttcagcttcc gccatgctgc gggtttctctg tgccactgcc ctcttggtt tgagggagcc
 240
 gactgcggtg tggaggtgga cgagtgtgcc tcacggccat gcctcaatgg aggccactgc
 300
 caggacctgc ccaatggctt ccagtgtcac tgcccagatg gctacgcagg gccgacatgt
 360
 gaggaagatg tggatgaatg cctgtccgat cctgcctgc acggcggaac ctgcagtgc
 420
 actgtggcag gctatatctg caggtgccca gagacctggg gtgggcgcga ctgttctgtg
 480
 cagctcactg gctgccaggg ccacacctgc ccgctggctg ccacctgcat ccctattctt
 540
 gagtctgggg tccacagtta cgtctgccac tgcccacctg gtacctatgg accgttctgt
 600
 ggccagaata ccaccttctc tgtgatggct gggagcccca ttcaggcatc agtgccagct
 660
 ggtggccccc tgggtctggc actgaggttt cgcaccacac tgcccgtggg gaccttggcc
 720

actcgcaatg acaccaagga aagctt
746

<210> 588

<211> 248

<212> PRT

<213> Homo sapiens

<400> 588

Ala Ser Cys Leu Glu Gly Leu Gly Ser Phe Arg Cys Leu Cys Trp Pro
1 5 10 15
Gly Tyr Ser Gly Glu Leu Cys Glu Val Asp Glu Asp Glu Cys Ala Ser
20 25 30
Ser Pro Cys Gln His Gly Gly Arg Cys Leu Gln Arg Ser Asp Pro Ala
35 40 45
Leu Tyr Gly Gly Val Gln Ala Ala Phe Pro Gly Ala Phe Ser Phe Arg
50 55 60
His Ala Ala Gly Phe Leu Cys His Cys Pro Pro Gly Phe Glu Gly Ala
65 70 75 80
Asp Cys Gly Val Glu Val Asp Glu Cys Ala Ser Arg Pro Cys Leu Asn
85 90 95
Gly Gly His Cys Gln Asp Leu Pro Asn Gly Phe Gln Cys His Cys Pro
100 105 110
Asp Gly Tyr Ala Gly Pro Thr Cys Glu Glu Asp Val Asp Glu Cys Leu
115 120 125
Ser Asp Pro Cys Leu His Gly Gly Thr Cys Ser Asp Thr Val Ala Gly
130 135 140
Tyr Ile Cys Arg Cys Pro Glu Thr Trp Gly Gly Arg Asp Cys Ser Val
145 150 155 160
Gln Leu Thr Gly Cys Gln Gly His Thr Cys Pro Leu Ala Ala Thr Cys
165 170 175
Ile Pro Ile Phe Glu Ser Gly Val His Ser Tyr Val Cys His Cys Pro
180 185 190
Pro Gly Thr His Gly Pro Phe Cys Gly Gln Asn Thr Thr Phe Ser Val
195 200 205
Met Ala Gly Ser Pro Ile Gln Ala Ser Val Pro Ala Gly Gly Pro Leu
210 215 220
Gly Leu Ala Leu Arg Phe Arg Thr Thr Leu Pro Ala Gly Thr Leu Ala
225 230 235 240
Thr Arg Asn Asp Thr Lys Glu Ser
245

<210> 589

<211> 381

<212> DNA

<213> Homo sapiens

<400> 589

atctcacaag tacaattaca gtctcaagaa ctgagctatc agcaaaagca aggtcttcag
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ccagtacctc tgcaagccac tatgagtgtc gcaactggta tccagccatc gcctgtaaat
120
gtggttggtg taacttcagc tttagggtcag cagccttcca tttccagttt ggctcaaccc
180

cagctaccat attctcaggc ggctcctcca gtgcaaactc cccttcaggc ggcaccacca
 240
 ccccaacagt tacagtatgg acaacagcaa ccaatgggtt ctacacagat ggccccaggc
 300
 catgtcaaat cagtgactca aaatcctgct tcagagtatg tacaacagca gccaatctt
 360
 caaacagcaa tgcctccgg a
 381

<210> 590

<211> 127

<212> PRT

<213> Homo sapiens

<400> 590

Ile	Ser	Gln	Val	Gln	Leu	Gln	Ser	Gln	Glu	Leu	Ser	Tyr	Gln	Gln	Lys
1				5					10					15	
Gln	Gly	Leu	Gln	Pro	Val	Pro	Leu	Gln	Ala	Thr	Met	Ser	Ala	Ala	Thr
			20					25					30		
Gly	Ile	Gln	Pro	Ser	Pro	Val	Asn	Val	Val	Gly	Val	Thr	Ser	Ala	Leu
		35					40					45			
Gly	Gln	Gln	Pro	Ser	Ile	Ser	Ser	Leu	Ala	Gln	Pro	Gln	Leu	Pro	Tyr
	50					55					60				
Ser	Gln	Ala	Ala	Pro	Pro	Val	Gln	Thr	Pro	Leu	Pro	Gly	Ala	Pro	Pro
65					70					75					80
Pro	Gln	Gln	Leu	Gln	Tyr	Gly	Gln	Gln	Gln	Pro	Met	Val	Ser	Thr	Gln
				85					90					95	
Met	Ala	Pro	Gly	His	Val	Lys	Ser	Val	Thr	Gln	Asn	Pro	Ala	Ser	Glu
			100						105				110		
Tyr	Val	Gln	Gln	Gln	Pro	Ile	Leu	Gln	Thr	Ala	Met	Ser	Ser	Gly	
			115					120					125		

<210> 591

<211> 684

<212> DNA

<213> Homo sapiens

<400> 591

tcgaccatgg atcatctgcg ccacggcatc cacctgcgtg gttatgcgca gaagaacccg
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 aagcaggaat acaagcgcgga gtcgttcacc ctgttctccg agctgctgga ctgatcaag
 120
 cgcgattcga ttcgggtcct cttccacgtc caggggcccgg gggaaaaatc cgtatcgaaa
 180
 naaaaagcgc gcctgcgtca ggaagccgaa gccctggccc agcgcattgca gttcgagcac
 240
 gctgaagccc caggcctgga cgcgcgggaa atcctcggtg aagaagtcga tgcgcacctg
 300
 gccaccgcgc cggtagcga cagacagaag ctggggccgta acgaactgtg ctactgcggt
 360
 tcgggcaaga agtacaagca ctgccacggt cagatcagct aaggtcttta ccggatactg
 420
 aaatacctgc gccgcgaccg gcattagccg tcgcggcggt tttccatttg aaacactgcc
 480

cttgtgacgg cagtgcagat atcacattaa aaggagggca ttcattgggtg ttggttctgg
 540
 gtccttggcc tacgttgac cgggttgccg gttttgaact cggatcgcc tcggccggta
 600
 tcaagcgccc tgggcgcaag gatgtggtgg cgatgcgctg cgccgaaggt tccacggtgg
 660
 cgggggtgtt taccctcaac gcgt
 684

<210> 592
 <211> 133
 <212> PRT
 <213> Homo sapiens

<400> 592
 Ser Thr Met Asp His Leu Arg His Gly Ile His Leu Arg Gly Tyr Ala
 1 5 10 15
 Gln Lys Asn Pro Lys Gln Glu Tyr Lys Arg Glu Ser Phe Thr Leu Phe
 20 25 30
 Ser Glu Leu Leu Asp Ser Ile Lys Arg Asp Ser Ile Arg Val Leu Phe
 35 40 45
 His Val Gln Gly Pro Gly Glu Lys Ser Val Ser Lys Xaa Lys Ala Arg
 50 55 60
 Leu Arg Gln Glu Ala Glu Ala Leu Ala Gln Arg Met Gln Phe Glu His
 65 70 75 80
 Ala Glu Ala Pro Gly Leu Asp Ala Pro Glu Ile Leu Gly Glu Glu Val
 85 90 95
 Asp Val Ala Leu Ala Thr Ala Pro Val Arg Asn Glu Gln Lys Leu Gly
 100 105 110
 Arg Asn Glu Leu Cys Tyr Cys Gly Ser Gly Lys Lys Tyr Lys His Cys
 115 120 125
 His Gly Gln Ile Ser
 130

<210> 593
 <211> 615
 <212> DNA
 <213> Homo sapiens

<400> 593
 nnacgcgtgc agaccgcgcg gagtctcgct ccgggtgcgga tagcgtagg ctcccaaacc
 60
 tgtgaaaccg tcacggtaga gcgtcgtggc gggctaccac ttagagcggc ccgattcacc
 120
 gataccatcc ccgcgccgct aggccagcca cgatggtcga cggccaccat ccagacccca
 180
 gtcataccta ctacacgtgg tcgattcgtg atcggccccg tcatgatgcg caccatcgac
 240
 ccgtttggca tggcccgcca tcacaccgat ctcggtcagg ttgccgaagt cattgtcacg
 300
 ccaaggatcg tcgatttggg cgccctccggg gagctcgggg gtcagggatt cgacacaagg
 360
 tcctcagcga tccatgccgg acgacgtggt cccgacgat ccatggtgcg cgattggcac
 420

accggagact cggtgcgacg cattcactgg cgctccaccg ctcaccgagg ggacctcatg
 480
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<210> 594

<211> 205

<212> PRT

<213> Homo sapiens

<400> 594

Xaa	Arg	Val	Gln	Thr	Ala	Arg	Ser	Leu	Ala	Pro	Val	Arg	Ile	Ala	Leu
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			20					25					30		
Pro	Leu	Arg	Ala	Ala	Arg	Phe	Thr	Asp	Thr	Ile	Pro	Ala	Pro	Leu	Gly
		35					40					45			
Gln	Pro	Arg	Trp	Ser	Thr	Ala	Thr	Ile	Gln	Thr	Pro	Val	Ile	Pro	Thr
	50					55					60				
Thr	Arg	Gly	Arg	Phe	Val	Ile	Gly	Pro	Val	Met	Met	Arg	Thr	Ile	Asp
65					70					75				80	
Pro	Phe	Gly	Met	Ala	Arg	His	His	Thr	Asp	Leu	Gly	Gln	Val	Ala	Glu
				85					90					95	
Val	Ile	Val	Thr	Pro	Arg	Ile	Val	Asp	Leu	Gly	Ala	Ser	Gly	Glu	Leu
			100					105					110		
Gly	Gly	Gln	Gly	Phe	Asp	Thr	Arg	Ser	Ser	Ala	Ile	His	Ala	Gly	Arg
		115					120					125			
Arg	Gly	Pro	Asp	Asp	Ala	Met	Val	Arg	Asp	Trp	His	Thr	Gly	Asp	Ser
	130					135					140				
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145				150					155					160	
Val	Arg	Cys	Glu	Glu	Gln	Ala	Trp	Asn	Pro	Ser	Val	Val	Ile	Val	Leu
			165					170					175		
Asp	Ser	Arg	Ala	Arg	Arg	His	Ala	Gly	Thr	Gly	Pro	Asp	Ala	Ser	Phe
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<210> 595

<211> 303

<212> DNA

<213> Homo sapiens

<400> 595

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 180

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 300
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 303

<210> 596
 <211> 88
 <212> PRT
 <213> Homo sapiens

<400> 596
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 20 25 30
 Ala Arg Leu Cys Pro Gln Pro Pro Arg Asn Ser Leu Pro Gly Thr Val
 35 40 45
 Ser Ala Leu Arg Ser Pro Glu Gln Gly Ser Glu Lys Cys Pro Ser Gln
 50 55 60
 Lys His Gly Thr Cys Leu Ser Ser Gly Lys Ser Ser Lys Ser Gly Trp
 65 70 75 80
 Asp Gln Gly Pro Arg Asp Leu Val
 85

<210> 597
 <211> 2709
 <212> DNA
 <213> Homo sapiens

<400> 597
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 aagaaccaca tgggtggagaa gacctacgaa tgtaaagaat gcgggaaatc ctttggcgat
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 ctctgtccc ggaggaaaca catgaggatt cacatcgtca agaaaccgt ggaatgtcgg
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 cagtgcggga agaccttcg aaaccagtc atccttaaga ctcacatgaa ctctcacact
 240
 ggagagaaac catacgggtg cgatctctgc gggaaagctt tcagcgcgag ttcaaaccctc
 300
 accgcacaca ggaagataca cacgcaagag agacgctacg aatgcgccgc ctgcgggaaa
 360
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 420
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 480
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780
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1020
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1080
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1140
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gaatgggccg caaaccacgg ccagctgctt gtctttgtat ggcttgccag ctaacaatag
1260
tggttccatc tttaaggaag aagaatgttt gatggagaaa atttgtggcc aatgaagtct
1320
gaaatacttc ctgtcatctg cccctttcca gaaaaacttg gccgaccctt ggtctacagc
1380
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1440
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1680
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1740
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1800
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1980
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2160
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2220
tagtgacttc cccggtatcc actctcatct tcttccaata tcaagagaat ccagggttctg
2280

tcagattagt aagggtgtgct aatctaaatt ttaaaaaatc tcttacaggt tttcttgtag
 2340
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 2400
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 2460
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 2520
 caccttaacg accgtgcata tgaaaaccac agtctaagga agtgactgca gaaagctcac
 2580
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 2700
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 2709

<210> 598
 <211> 240
 <212> PRT
 <213> Homo sapiens

<400> 598
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 Asn Leu His Lys Lys Asn His Met Val Glu Lys Thr Tyr Glu Cys Lys
 20 25 30
 Glu Cys Gly Lys Ser Phe Gly Asp Leu Val Ser Arg Arg Lys His Met
 35 40 45
 Arg Ile His Ile Val Lys Lys Pro Val Glu Cys Arg Gln Cys Gly Lys
 50 55 60
 Thr Phe Arg Asn Gln Ser Ile Leu Lys Thr His Met Asn Ser His Thr
 65 70 75 80
 Gly Glu Lys Pro Tyr Gly Cys Asp Leu Cys Gly Lys Ala Phe Ser Ala
 85 90 95
 Ser Ser Asn Leu Thr Ala His Arg Lys Ile His Thr Gln Glu Arg Arg
 100 105 110
 Tyr Glu Cys Ala Ala Cys Gly Lys Val Phe Gly Asp Tyr Leu Ser Arg
 115 120 125
 Arg Arg His Met Ser Val His Leu Val Lys Lys Arg Val Glu Cys Arg
 130 135 140
 His Cys Gly Lys Ala Phe Arg Asn Gln Ser Thr Leu Lys Thr His Met
 145 150 155 160
 Arg Ser His Thr Gly Glu Lys Pro Tyr Glu Cys Asp His Cys Gly Lys
 165 170 175
 Ala Phe Ser Ile Gly Ser Asn Leu Asn Val His Arg Arg Ile His Thr
 180 185 190
 Gly Glu Lys Pro Tyr Glu Cys Leu Val Cys Gly Lys Ala Phe Ser Asp
 195 200 205
 His Ser Ser Leu Arg Ser His Val Lys Thr His Arg Gly Glu Lys Leu
 210 215 220
 Phe Xaa Cys His Pro Cys Gly Lys Gly Ser Ser Glu Arg Ala Xaa Leu
 225 230 235 240

<210> 599
 <211> 340
 <212> DNA
 <213> Homo sapiens

<400> 599
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 caggcatgtt tgccgggccc catcccttgc acttgacgtc cgtggcctat cggccgagggc
 180
 gcaggcctgc agttggagcc gtgcgtgggt gtcccgcgcg aggagcgtgt tggcagacta
 240
 tggggctcgt cggaggacga ggatgtgagt ggcgatggct ttgcgcgact gggcgatttc
 300
 caccggcgca tgggtgtcca gatcgtccag ggcattgatca
 340

<210> 600
 <211> 111
 <212> PRT
 <213> Homo sapiens

<400> 600
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 Arg Ala Lys Pro Ser Pro Leu Thr Ser Ser Ser Ser Asp Glu Pro His
 20 25 30
 Ser Leu Pro Thr Arg Ser Ser Arg Gly Thr Pro Thr His Gly Ser Asn
 35 40 45
 Cys Arg Pro Ala Pro Arg Pro Ile Gly His Gly Leu Gln Val Gln Gly
 50 55 60
 Met Arg Pro Gly Lys His Ala Trp Ala Lys Arg Cys Arg Leu Arg Cys
 65 70 75 80
 Thr Ala Thr Pro Ser Thr Cys Ala Met Thr Pro Asn Lys Arg Ser Asp
 85 90 95
 Thr Thr Glu Arg Ser His His Asp Val Lys Ser Arg Glu Ala Arg
 100 105 110

<210> 601
 <211> 421
 <212> DNA
 <213> Homo sapiens

<400> 601
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 ccgcgctcca ccattttgat ggaaggcgct ccgctggcgg tcgcgcctta cggccagccg
 120
 cagctgtcga tggccccgct gtctatcggc aatctgcaat cggaggacgt ggtgcgcggc
 180
 ggcggcggcg tgcgtacgg gccgcagaac gtcggcggcg tgatcaactt cgttaccgga
 240

gacattccca aaacgtttgg cgggtgccgcc agcgtacaaa cccaggggtgc cagccacggc
 300
 ggccctgaaga ccctgaccag cgccctccgtg ggccggcaccg cagacaacgg cctcggcgcc
 360
 gagctgctct actccggcct gcacggccag ggctaccgcg acaacaacga caacaccgac
 420
 n
 421

<210> 602
 <211> 140
 <212> PRT
 <213> Homo sapiens

<400> 602
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 Ser Arg Leu Ser Pro Arg Ser Thr Ile Leu Met Asp Gly Val Pro Leu
 20 25 30
 Ala Val Ala Pro Tyr Gly Gln Pro Gln Leu Ser Met Ala Pro Leu Ser
 35 40 45
 Ile Gly Asn Leu Gln Ser Val Asp Val Val Arg Gly Gly Gly Ala Val
 50 55 60
 Arg Tyr Gly Pro Gln Asn Val Gly Gly Val Ile Asn Phe Val Thr Arg
 65 70 75 80
 Asp Ile Pro Lys Thr Phe Gly Gly Ala Ala Ser Val Gln Thr Gln Gly
 85 90 95
 Ala Ser His Gly Gly Leu Lys Thr Leu Thr Ser Ala Ser Val Gly Gly
 100 105 110
 Thr Ala Asp Asn Gly Leu Gly Ala Glu Leu Leu Tyr Ser Gly Leu His
 115 120 125
 Gly Gln Gly Tyr Arg Asp Asn Asn Asp Asn Thr Asp
 130 135 140

<210> 603
 <211> 309
 <212> DNA
 <213> Homo sapiens

<400> 603
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 120
 gtgctggatt acctgccggg cctgatgccg gctgacaaac ctggttacct tatgggcgtt
 180
 ggcaaaccgg aagacctcgt agagggtgtg cgccgcggtg tggacatgtt cgattgcgtg
 240
 atgccaaacc gtaatgcccg caatgggcat ctgttcacg atacaggcgt gctgaagatc
 300
 cgtaacgcg
 309

<210> 604

<211> 103
 <212> PRT
 <213> Homo sapiens

<400> 604

Xaa Gly Gly Met His Glu Ser Leu Arg Lys Arg Ser Leu Glu Gly Leu
 1 5 10 15
 Asp Lys Ile Gly Phe Asp Gly Leu Ala Ile Gly Gly Leu Ser Val Gly
 20 25 30
 Glu Pro Lys His Glu Met Ile Lys Val Leu Asp Tyr Leu Pro Gly Leu
 35 40 45
 Met Pro Ala Asp Lys Pro Arg Tyr Leu Met Gly Val Gly Lys Pro Glu
 50 55 60
 Asp Leu Val Glu Gly Val Arg Arg Gly Val Asp Met Phe Asp Cys Val
 65 70 75 80
 Met Pro Thr Arg Asn Ala Arg Asn Gly His Leu Phe Ile Asp Thr Gly
 85 90 95
 Val Leu Lys Ile Arg Asn Ala
 100

<210> 605
 <211> 428
 <212> DNA
 <213> Homo sapiens

<400> 605

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 actggcccaa ggctgggcta tagtcagggtg catagtactt ggtgaagtag cgtacgtccg
 120
 caccacatc acatttcagt accttggcta tcttcaatcg gaaaaaaga ttggagtaaa
 180
 tggttagttt tggtaatggc aacgccgttt gactggaaga gttttggaag gtaatgaccg
 240
 attcccagtg caaagggtccc catgctacat cctgcgacaa tgaggccgtt agcacgttta
 300
 ttgcctcgct gctttgccga acgccaacct ctgtaccgat acgctgatac tgattgttga
 360
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 420
 aagtcttg
 428

<210> 606
 <211> 135
 <212> PRT
 <213> Homo sapiens

<400> 606

Met Asp Glu Leu Thr Asn Tyr Thr Tyr Leu Ala Gln Ala Tyr Thr Ile
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 Asn Asn Gln Tyr Gln Arg Ile Gly Thr Glu Val Gly Val Arg Gln Ser
 20 25 30
 Ser Glu Ala Ile Asn Val Leu Thr Ala Ser Leu Ser Gln Asp Val Ala

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      35              40              45
Trp Gly Pro Leu His Trp Glu Ser Val Ile Thr Phe Gln Asn Ser Ser
      50              55              60
Ser Gln Thr Ala Leu Pro Leu Pro Lys Leu Asn Ile Tyr Ser Asn Leu
65              70              75              80
Phe Phe Arg Leu Lys Ile Ala Lys Val Leu Lys Cys Asp Val Gly Ala
      85              90              95
Asp Val Arg Tyr Phe Thr Lys Tyr Tyr Ala Pro Asp Tyr Ser Pro Ala
      100              105              110
Leu Gly Gln Phe Val Val Gln Glu Asn Thr Asp Arg Val Glu Ile Gly
      115              120              125
Asn Tyr Pro Ile Val Asn Ala
      130              135

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<210> 607
 <211> 366
 <212> DNA
 <213> Homo sapiens

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<400> 607
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120
gttttcaacg gcaaacatta tcaaattgta aagaaagagg atgacctatt caaattgacc
180
aaaagcaatt gttacaagtt gagcaacata aaatttaaca attggaaata cttgtacttg
240
acaacgcacg gtgtgtacaa cgtgttcacc aacagctttc attcgagctg tccatttttg
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ttgggcacca cgttgccgca gacattcaag aagcccaccg acgaaaagta tttgcccgag
360
gacgcg
366

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<210> 608
 <211> 122
 <212> PRT
 <213> Homo sapiens

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<400> 608
Asp His Asp Glu Leu Trp Ala Tyr Thr Tyr Glu Asn Val Met Ala Leu
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Asn Leu Pro Pro Asp Ile Val Cys Lys Gly Phe Phe Arg Lys Leu Glu
      20              25              30
Asn Val Val Thr Gly Val Asn Leu Val Phe Asn Gly Lys His Tyr Gln
      35              40              45
Ile Val Lys Lys Glu Asp Asp Leu Phe Lys Leu Thr Lys Ser Asn Cys
      50              55              60
Tyr Lys Leu Ser Asn Ile Lys Phe Asn Asn Trp Lys Tyr Leu Tyr Leu
65              70              75              80
Thr Thr His Gly Val Tyr Asn Val Phe Thr Asn Ser Phe His Ser Ser
      85              90              95
Cys Pro Phe Leu Leu Gly Thr Thr Leu Pro Gln Thr Phe Lys Lys Pro

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100 105 110
 Thr Asp Glu Lys Tyr Leu Pro Glu Asp Ala
 115 120
 <210> 609
 <211> 291
 <212> DNA
 <213> Homo sapiens
 <400> 609
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 taccagcctt ggaagcagga cccccacgcg acggaatcgc cggtttccaa gtcgtcgccc
 180
 ccgaagcctc aaatttcccc cgccccgtac gccgggcccgg ctccgaagac accggccaca
 240
 cctggaccat ctggggcggg ggcgcgcggc tgggtggtggc ggggtggagcc g
 291

<210> 610
 <211> 69
 <212> PRT
 <213> Homo sapiens

<400> 610
 Met Ser Pro Val Ala Met Asp Asp Ser Ser Ser Pro Tyr Pro Ala Trp
 1 5 10 15
 Lys Gln Asp Pro His Ala Thr Glu Ser Pro Ala Ser Lys Ser Ser Pro
 20 25 30
 Pro Lys Pro Gln Thr Ser Pro Ala Pro Tyr Ala Gly Pro Ala Pro Lys
 35 40 45
 Thr Pro Ala Thr Pro Gly Pro Ser Gly Ala Gly Ala Pro Pro Trp Trp
 50 55 60
 Trp Arg Val Glu Pro
 65

<210> 611
 <211> 393
 <212> DNA
 <213> Homo sapiens

<400> 611
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 tgtaccaag tagagaggtg ttcgatgccac cacagtccgg aagaaaagaa gcaagcactg
 120
 acgcgcacatc ggcgcacatc aggtcaggtg gcgactcttg agcaagcgct tgatgcaggc
 180
 gcgaaatgtc ctgcaattct tcagcagctt gcggccgttc gtggcgagc caacggattg
 240
 atggcaacgg ttctggagag ctatctgcgg gaagagtttc ccagtagcga aatcaggagc
 300

gattcgcaga acaagtccat tgacgagacc atctctatcg tccgctccta tctgcggttag
 360
 aggcaccagg gtgtcctcgg tgagggcaaa ttt
 393

<210> 612
 <211> 119
 <212> PRT
 <213> Homo sapiens

<400> 612
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 Ile Met Arg Arg Cys Thr Gln Val Glu Arg Cys Ser Met Pro His Ser
 20 25 30
 Pro Glu Glu Lys Lys Gln Ala Leu Thr Arg Ile Arg Arg Ile Lys Gly
 35 40 45
 Gln Val Ala Thr Leu Glu Gln Ala Leu Asp Ala Gly Ala Lys Cys Pro
 50 55 60
 Ala Ile Leu Gln Gln Leu Ala Ala Val Arg Gly Ala Val Asn Gly Leu
 65 70 75 80
 Met Ala Thr Val Leu Glu Ser Tyr Leu Arg Glu Glu Phe Pro Ser Ser
 85 90 95
 Glu Ile Arg Ser Asp Ser Gln Asn Lys Ser Ile Asp Glu Thr Ile Ser
 100 105 110
 Ile Val Arg Ser Tyr Leu Arg
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<210> 613
 <211> 567
 <212> DNA
 <213> Homo sapiens

<400> 613
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 ctggaaacgg ttcacaagga agccgagtcc caagcctact tttggctcctg acagtgtgga
 120
 acactggata aagagagtgg agaaagcctc agagtttgca gtgtcaaag cattttttac
 180
 tagaaattca gattttaccta gaagtccttg gggccaaatc acagatttga aaacatctga
 240
 gcaaataagag gatcatgatg aaatctatgc agaagctcag gagctgggtca atgactgggt
 300
 agacaccaaa cttaagcaag aattagcaag tgaggaagaa ggtgatgcta aaaacactgt
 360
 gtcaagtgtc actattatgc cggaagccaa tggccatttg aaatatgaca agtttgatga
 420
 tttatgtggc tatttgagg aagaagagga aagtaccacc gttcaaaaat ttatagacca
 480
 tctgctccat aaaaatgtgg tagattctgc aatgatggaa gatcttgga ggaaggaaaa
 540
 ccaagacaag aagcagcaga aggatcc
 567

<210> 614
 <211> 187
 <212> PRT
 <213> Homo sapiens

<400> 614
 Met Leu Leu Ala Pro Gln Gly Arg Ser Phe Ser Lys Lys Arg Met Gly
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 Leu Asn Arg Trp Lys Arg Phe Thr Arg Lys Pro Ser Pro Lys Pro Thr
 20 25 30
 Phe Gly Pro Asp Ser Val Glu His Trp Ile Lys Arg Val Glu Lys Ala
 35 40 45
 Ser Glu Phe Ala Val Ser Asn Ala Phe Phe Thr Arg Asn Ser Asp Leu
 50 55 60
 Pro Arg Ser Pro Trp Gly Gln Ile Thr Asp Leu Lys Thr Ser Glu Gln
 65 70 75 80
 Ile Glu Asp His Asp Glu Ile Tyr Ala Glu Ala Gln Glu Leu Val Asn
 85 90 95
 Asp Trp Leu Asp Thr Lys Leu Lys Gln Glu Leu Ala Ser Glu Glu Glu
 100 105 110
 Gly Asp Ala Lys Asn Thr Val Ser Ser Val Thr Ile Met Pro Glu Ala
 115 120 125
 Asn Gly His Leu Lys Tyr Asp Lys Phe Asp Asp Leu Cys Gly Tyr Leu
 130 135 140
 Glu Glu Glu Glu Glu Ser Thr Thr Val Gln Lys Phe Ile Asp His Leu
 145 150 155 160
 Leu His Lys Asn Val Val Asp Ser Ala Met Met Glu Asp Leu Gly Arg
 165 170 175
 Lys Glu Asn Gln Asp Lys Lys Gln Gln Lys Asp
 180 185

<210> 615
 <211> 685
 <212> DNA
 <213> Homo sapiens

<400> 615
 nnacgcgtgc tgccttaagt gacggattcc atgtcgggtgc gagtcggggtc ggggccgatg
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 ggccatgaac gggccctagc gagggccgga ctgcggccccg tggccgggatg cgacgaggcg
 120
 gggcggggcg cgtgtgcagg gccattggta gccgcagctg tcattcttga tgatcgaga
 180
 tccggcagga ttgcggggct agcagattcc aagacactat ctgcggccaa gagagaggcc
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 ctgtttaacg tcatcatgga taaagctttg gcagtgtcgt ggggtacgtgt agaagccgac
 300
 gaatcgatc ggttggggat gcaggaggca gatatcagcg gcttgaggcg tgccgtgggtg
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 420
 gttcccgatc tgggaatgtg gaagggcgat tcagtgtgtg cgtgtgtggc agctgcctcc
 480

atcgtggcca aagtggccag ggatecgcac atgacgccta tggacgccga gattcctggt
 540
 tacgattttg cgggtgcacaa ggggtacgcg acagccttac accagcgtcg tctgaaggag
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 660
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 685

<210> 616
 <211> 213
 <212> PRT
 <213> Homo sapiens

<400> 616
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<211> 425

<212> DNA

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Glu Tyr Gln Arg Asn Gln Ala Val Cys Gly Ile Arg Leu Pro Glu Gly
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Lys Ala Pro Gln Gly Glu His Asp Glu Asn Ile Asp Tyr Leu Arg Leu
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Val Glu Leu Val Gly Pro Xaa Xaa Ser Ala Gln Leu His Asp Leu Ser
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<210> 623

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<212> DNA

<213> Homo sapiens

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<210> 624

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<212> PRT

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<211> 1294

<212> PRT

<213> Homo sapiens

<400> 628

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749

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 1125 1130 1135
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 1140 1145 1150
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 <211> 411
 <212> DNA
 <213> Homo sapiens

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      35           40           45
Thr Leu Pro Gly Arg Asn Trp Ile Asn Leu Gly Leu Leu Val Val Ile
      50           55           60
Ile Ala Cys Gly Ile Trp Phe Ser Asn Val Ser Gly Gly Ile Ala Trp
      65           70           75           80
Leu Pro Leu Ala Leu Leu Thr Leu Ala Ser Leu Phe Leu Gly Phe His
      85           90           95
Phe Val Ala Ala Ile Gly Gly Ala Asp Met Pro Val Val Ile Ser Met
      100           105           110
Leu Asn Ser Tyr Ser Gly Trp Ala Ala Ala Phe Ser Gly Phe Ser Leu
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His Ile Pro Val Leu Ile Val Thr Gly
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 <211> 275
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 <213> Homo sapiens

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275

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Lys Glu Ala Leu Leu Ile Leu Ser Lys Glu Leu Asp Thr Cys Gln Gln
      35           40           45
Glu Arg Asp Gln Tyr Lys Leu Met Ala Asn Gln Leu Arg Glu Arg His
      50           55           60
Gln Ser Leu Lys Lys Lys Tyr Arg Glu Leu Ile Asp Gly Asp Pro Ser
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<210> 634
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 Val Asp Ala Val Val Asn Ala Val Glu His Tyr Ser Glu Leu Thr Pro
 35 40 45
 Gln Leu Leu Thr Thr Gly Gly Thr Ser Asp Gly Arg Phe Ile Ala Gln
 50 55 60
 Met Gly Xaa Gln Val Val Glu Leu Gly Pro Val Asn Ala Thr Ile His
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 Met Tyr Gln Arg Ile Met Glu Gln Leu Val Ala
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<210> 635
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<210> 636

<211> 619

<212> PRT

<213> Homo sapiens

<400> 636

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Val	Val	Leu	Asp	Phe	Ser	Ala	Asp	Ala	Thr	Glu	Gly	Pro	Ile	Arg	Ala
		20						25					30		
Tyr	Leu	Leu	Asp	Val	Val	Asp	Ser	Glu	Glu	Gln	Asp	Met	Ala	Leu	Asn
		35					40					45			
Ile	His	Ala	Phe	Ser	Ala	Gly	Leu	Gly	Gly	Ala	Ile	Gly	Tyr	Val	Leu
	50					55				60					
Gly	Gly	Leu	Asp	Trp	Thr	Gln	Thr	Phe	Leu	Gly	Ser	Trp	Phe	Arg	Thr
65					70					75				80	
Gln	Asn	Gln	Val	Leu	Phe	Phe	Phe	Ala	Ala	Ile	Ile	Phe	Thr	Val	Ser
			85					90					95		
Val	Ala	Leu	His	Leu	Phe	Ser	Ile	Asp	Glu	Glu	Gln	Tyr	Ser	Pro	Gln
		100						105					110		
Gln	Glu	Arg	Ser	Ala	Glu	Glu	Pro	Gly	Ala	Leu	Asp	Gly	Gly	Glu	Pro
	115						120					125			
His	Gly	Val	Pro	Ala	Phe	Pro	Asp	Glu	Val	Gln	Ser	Glu	His	Glu	Leu
	130					135				140					
Ala	Leu	Asp	Tyr	Pro	Asp	Val	Asp	Ile	Met	Arg	Ser	Lys	Ser	Asp	Ser
145				150						155				160	
Ala	Leu	His	Val	Pro	Asp	Thr	Ala	Leu	Asp	Leu	Glu	Pro	Glu	Leu	Leu
		165						170					175		
Phe	Leu	His	Asp	Ile	Glu	Pro	Ser	Ile	Phe	His	Asp	Ala	Ser	Tyr	Pro
		180					185					190			
Ala	Thr	Pro	Arg	Ser	Thr	Ser	Gln	Glu	Leu	Ala	Lys	Thr	Lys	Leu	Pro
	195						200					205			
Arg	Leu	Ala	Thr	Phe	Leu	Lys	Glu	Ala	Ala	Lys	Glu	Asp	Glu	Thr	Leu
	210					215					220				
Leu	Asp	Asn	His	Leu	Asn	Glu	Ala	Lys	Val	Pro	Asn	Gly	Ser	Gly	Ser
225				230						235				240	
Pro	Thr	Lys	Asp	Ala	Leu	Gly	Gly	Tyr	Thr	Arg	Val	Asp	Thr	Lys	Pro
		245						250					255		
Ser	Ala	Thr	Ser	Ser	Met	Arg	Arg	Arg	Arg	His	Ala	Phe	Arg	Arg	
		260					265					270			
Gln	Ala	Ser	Ser	Thr	Phe	Ser	Tyr	Tyr	Gly	Lys	Leu	Gly	Ser	His	Cys
	275						280					285			
Tyr	Arg	Tyr	Arg	Arg	Ala	Asn	Ala	Val	Val	Leu	Ile	Lys	Pro	Ser	Arg

290		295		300	
Ser Met Ser Asp Leu Tyr	Asp Met Gln Lys Arg	Gln Arg Gln His Arg			
305	310	315	320		
His Arg Asn Gln Ser Gly	Ala Thr Thr Ser Ser	Gly Asp Thr Glu Ser			
	325	330	335		
Glu Glu Gly Glu Gly Glu	Thr Thr Val Arg Leu	Leu Trp Leu Ser Met			
	340	345	350		
Leu Lys Met Pro Arg Glu	Leu Met Arg Leu Cys	Leu Cys His Leu Leu			
	355	360	365		
Thr Trp Phe Ser Val Ile	Ala Glu Ala Val Phe	Tyr Thr Asp Phe Met			
	370	375	380		
Gly Gln Val Ile Phe Glu	Gly Asp Pro Lys Ala	Pro Ser Asn Ser Thr			
385	390	395	400		
Ala Trp Gln Ala Tyr Asn	Ala Gly Val Lys Met	Gly Cys Trp Gly Leu			
	405	410	415		
Val Ile Tyr Ala Ala Thr	Gly Ala Ile Cys Ser	Ala Leu Leu Gln Lys			
	420	425	430		
Tyr Leu Asp Asn Tyr Asp	Leu Ser Val Arg Val	Ile Tyr Val Leu Gly			
	435	440	445		
Thr Leu Gly Phe Ser Val	Gly Thr Ala Val Met	Ala Met Phe Pro Asn			
	450	455	460		
Val Tyr Val Ala Met Val	Thr Ile Ser Thr Met	Gly Ile Val Ser Met			
465	470	475	480		
Ser Ile Ser Tyr Cys Pro	Tyr Ala Leu Leu Gly	Gln Tyr His Asp Ile			
	485	490	495		
Lys Gln Tyr Ile His His	Ser Pro Gly Asn Ser	Lys Arg Gly Phe Gly			
	500	505	510		
Ile Asp Cys Ala Ile Leu	Ser Cys Gln Val Tyr	Ile Ser Gln Ile Leu			
	515	520	525		
Val Ala Ser Ala Leu Gly	Gly Val Val Asp Ala	Val Gly Thr Val Arg			
	530	535	540		
Val Ile Pro Met Val Ala	Ser Val Gly Ser Phe	Leu Gly Phe Leu Thr			
545	550	555	560		
Ala Thr Phe Leu Val Ile	Tyr Pro Asp Val Ser	Glu Glu Ala Lys Glu			
	565	570	575		
Glu Gln Lys Gly Leu Ser	Ser Pro Leu Ala Gly	Glu Gly Arg Ala Gly			
	580	585	590		
Gly Asn Ser Glu Lys Pro	Thr Val Leu Lys Leu	Thr Arg Lys Glu Gly			
	595	600	605		
Leu Gln Gly Pro Val Glu	Thr Glu Ser Val Val				
610	615				

<210> 637

<211> 370

<212> DNA

<213> Homo sapiens

<400> 637

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tctcgatcgg tgatgatctg gaaaggaaaa atcatcgtga ctactacatc acccgctact
120
acgcaaagac cgtcagttgg caggaaagtt gggtcctggg cccttaatcc atgggtgttt
180

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tgtaggccct tattatTTTT cggaatgggt cggtttattg cgattccagt attcctcact
 240
 gtgccgaata tcattaatat cggaatccaa gccgcgggtg tggcgattat ggccttcggt
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<210> 638
 <211> 99
 <212> PRT
 <213> Homo sapiens

<400> 638
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 20 25 30
 Pro Trp Cys Phe Cys Arg Pro Leu Leu Phe Phe Gly Met Val Arg Phe
 35 40 45
 Ile Ala Ile Pro Val Phe Leu Thr Val Pro Asn Ile Ile Asn Ile Gly
 50 55 60
 Ile Gln Ala Ala Val Val Ala Ile Met Ala Phe Gly Met Thr Phe Val
 65 70 75 80
 Ile Val Thr Ser Gly Ile Asp Leu Ser Val Gly Ser Val Ala Ala Leu
 85 90 95
 Ser Ala Met

<210> 639
 <211> 330
 <212> DNA
 <213> Homo sapiens

<400> 639
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 120
 gaggcggggg acgcgcaggt ctacgacttc tgtgacaacc aggtgcccgg aaccaccgag
 180
 aaggatcggg actactggcg ggacgtggga actatcgatg cctaccacga cgcgcacatg
 240
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 300
 atccaggaac aggcaccggg agcgaaattt
 330

<210> 640
 <211> 110
 <212> PRT
 <213> Homo sapiens

<400> 640

Xaa Ala Ser Met Gly Asn Tyr Ile Phe Ser Arg Asp Ala Leu Val Glu
 1 5 10 15
 Ala Leu Phe Ala Asp Ser Gln Ser Ala Glu Ser Arg His Asp Met Gly
 20 25 30
 Gly Asp Ile Ile Pro Arg Phe Val Glu Ala Gly Asp Ala Gln Val Tyr
 35 40 45
 Asp Phe Cys Asp Asn Gln Val Pro Gly Thr Thr Glu Lys Asp Arg Asp
 50 55 60
 Tyr Trp Arg Asp Val Gly Thr Ile Asp Ala Tyr His Asp Ala His Met
 65 70 75 80
 Asp Leu Val Ser Val Glu Pro Glu Phe Asn Leu Tyr Asn Pro Asp Trp
 85 90 95
 Pro Ile Trp Ser Ile Gln Glu Gln Ala Pro Gly Ala Lys Phe
 100 105 110

<210> 641

<211> 491

<212> DNA

<213> Homo sapiens

<400> 641

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 accgagtggc ctgcagcac ccgcatgttg ctgggcccac acacgggtgc caattccatt
 120
 ggagacatcc accgcaacaa gcgcaaggtc ttctccaaga tcttcagcca cgaggccctg
 180
 gagagttacc tgcccaagat ccagctggtg atccaggaca cactgcgcgc ctggagcagc
 240
 caccgagagg ccatcaacgt gtaccaggag gcgcagaagc tgaccttcg catggccatc
 300
 cgggtgctgc tgggcttcag catccctgag gaggaccttg ggcacctctt tgaggtctac
 360
 cagcagtttg tggacaatgt cttctccctg cctgtcgacc tgcccttcag tggctaccgg
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 ctgcagtga c
 491

<210> 642

<211> 163

<212> PRT

<213> Homo sapiens

<400> 642

Arg Val Thr Gly Ala Glu Asn Val Arg Lys Ile Leu Met Gly Glu His
 1 5 10 15
 His Leu Val Ser Thr Glu Trp Pro Arg Ser Thr Arg Met Leu Leu Gly
 20 25 30
 Pro Asn Thr Val Ser Asn Ser Ile Gly Asp Ile His Arg Asn Lys Arg
 35 40 45
 Lys Val Phe Ser Lys Ile Phe Ser His Glu Ala Leu Glu Ser Tyr Leu

```

      50              55              60
Pro Lys Ile Gln Leu Val Ile Gln Asp Thr Leu Arg Ala Trp Ser Ser
65              70              75              80
His Pro Glu Ala Ile Asn Val Tyr Gln Glu Ala Gln Lys Leu Thr Phe
      85              90              95
Arg Met Ala Ile Arg Val Leu Leu Gly Phe Ser Ile Pro Glu Glu Asp
      100             105             110
Leu Gly His Leu Phe Glu Val Tyr Gln Gln Phe Val Asp Asn Val Phe
      115             120             125
Ser Leu Pro Val Asp Leu Pro Phe Ser Gly Tyr Arg Arg Gly Ile Gln
      130             135             140
Ala Arg Gln Ile Leu Gln Lys Gly Leu Glu Lys Ala Ile Arg Glu Lys
145             150             155             160
Leu Gln Cys

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<210> 643
 <211> 628
 <212> DNA
 <213> Homo sapiens

<400> 643
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 gccatcacgc tgcgggaagg ccagtatgtg gaggtcctgg atgcagccca cccactgcgc
 120
 tggcttgtcc gcaccaagcc caccaagtcc agccctcac ggcagggctg ggtgtcacca
 180
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 240
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 360
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 420
 atcttcgca atgtgcggga catcggccgc ttccacagca gcttctgca ggagttgcag
 480
 cagtgcgaca cggacgacga cgtggccatg tgcttcatca agaaccaggc ggcctttgag
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 cagtacctgg agttcctggt gggacgtgtg caggctgagt cggtggtcgt cagcacggcc
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 atccaggagt tctacaagaa atacgcgt
 628

<210> 644
 <211> 209
 <212> PRT
 <213> Homo sapiens

<400> 644
 Xaa Ile Phe Asp Ile Tyr Val Val Thr Ala Asp Tyr Leu Pro Leu Gly
 1 5 10 15
 Ala Glu Gln Asp Ala Ile Thr Leu Arg Glu Gly Gln Tyr Val Glu Val

```

      20      25      30
Leu Asp Ala Ala His Pro Leu Arg Trp Leu Val Arg Thr Lys Pro Thr
      35      40      45
Lys Ser Ser Pro Ser Arg Gln Gly Trp Val Ser Pro Ala Tyr Leu Asp
      50      55      60
Arg Arg Leu Lys Leu Ser Pro Glu Trp Gly Ala Ala Glu Ala Pro Glu
65      70      75      80
Phe Pro Gly Glu Ala Val Ser Glu Asp Glu Tyr Lys Ala Arg Leu Ser
      85      90      95
Ser Val Ile Gln Glu Leu Leu Ser Ser Glu Gln Ala Phe Val Glu Glu
      100      105      110
Leu Gln Phe Leu Gln Ser His His Leu Gln His Leu Glu Arg Cys Pro
      115      120      125
His Val Pro Ile Ala Val Ala Gly Gln Lys Ala Val Ile Phe Arg Asn
      130      135      140
Val Arg Asp Ile Gly Arg Phe His Ser Ser Phe Leu Gln Glu Leu Gln
145      150      155      160
Gln Cys Asp Thr Asp Asp Asp Val Ala Met Cys Phe Ile Lys Asn Gln
      165      170      175
Ala Ala Phe Glu Gln Tyr Leu Glu Phe Leu Val Gly Arg Val Gln Ala
      180      185      190
Glu Ser Val Val Val Ser Thr Ala Ile Gln Glu Phe Tyr Lys Lys Tyr
      195      200      205
Ala

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<210> 645
 <211> 417
 <212> DNA
 <213> Homo sapiens

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<400> 645
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gaggggaagg gcatcaatgc agggctgggg tgtgggaagg tctgcagggc tggcaatggg
120
caagctcagg aatggtgggg gagacagttg gagccacggc agggacaatg gagctcagaa
180
ggtcctctctg tcattccctt tggaacccat tgatctggaa aatttggggc agtgtccttt
240
tccgtaggta ctggaggcac tggcttgaca tactacagcc ctcccaggag gcccagaagg
300
tagatgttat aactaccccc attttccaga tgaagaaact gagcctctgg gatctgcgga
360
agctcccaga gctggagcag ttagtccttg ggcctacac tcacagcaca gtttccc
417

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<210> 646
 <211> 95
 <212> PRT
 <213> Homo sapiens

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<400> 646
Met Val Gly Glu Thr Val Gly Ala Thr Ala Gly Thr Met Glu Leu Arg

```

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      1           5           10           15
Arg Ser Leu Cys His Pro Phe Trp Asn Pro Leu Ile Trp Lys Ile Trp
      20           25           30
Gly Ser Val Leu Phe Arg Arg Tyr Trp Arg His Trp Leu Asp Ile Leu
      35           40           45
Gln Pro Ser Gln Glu Ala Gln Lys Val Asp Val Ile Thr Thr Pro Ile
      50           55           60
Phe Gln Met Lys Lys Leu Ser Leu Trp Asp Leu Arg Lys Leu Pro Glu
      65           70           75           80
Leu Glu Gln Leu Val Pro Gly Pro Tyr Thr His Ser Thr Val Ser
      85           90           95

```

<210> 647

<211> 421

<212> DNA

<213> Homo sapiens

<400> 647

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acgcgtttcg gttcttgagc gttccacca attcagcggg ggtgagcggc cctgtgcat
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cgcgacgacg ggtgatcaga taggcgatat ccgcctcggt cagttgcacg gtgtcgttat
120
cggtagccat gcgtggcgaa ctctttggc atgggaaaat cgggtgaggg caacgggcac
180
agcaacagga cgtgtccctt gcggcacgtg gcaacacgtc agtatagcgc gtttccgccg
240
ggatttccgt tgaatgaagg caagaagtcg ggcacgcac cacttgctac cgctcggtgg
300
tacgatagcc gcggcgccac caggttggtt acattccaaa cgcaacgcag gaacccgcac
360
gaacagcggt tttcgcaaca aacccttat gacgctgggt ctggggcatt tcagtgtcga
420
c
421

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<210> 648

<211> 90

<212> PRT

<213> Homo sapiens

<400> 648

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Met Gly Lys Ser Gly Glu Ala Asn Gly His Ser Asn Arg Thr Cys Pro
  1           5           10           15
Leu Arg His Val Ala Thr Arg Gln Tyr Ser Ala Phe Pro Pro Gly Phe
      20           25           30
Pro Leu Asn Glu Gly Lys Lys Ser Gly Thr His Pro Pro Ala Thr Ala
      35           40           45
Arg Trp Tyr Asp Ser Arg Gly Ala Thr Arg Leu Ala Thr Phe Gln Thr
      50           55           60
Gln Arg Arg Asn Pro His Glu Gln Arg Phe Ser Gln Gln Thr Pro Tyr
      65           70           75           80
Asp Ala Gly Ser Arg Ala Phe Gln Cys Arg
      85           90

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<210> 649
 <211> 563
 <212> DNA
 <213> Homo sapiens

<400> 649
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 gacctcagtg tccaggcttg tgcatttagg ggctcaggtt tgggctctgt gcctatgagc
 120
 cagtctatgt gtgcactgtc tgtctgtctg tccgtctgcc agcaaccttc aaggccccag
 180
 gaggggaagg caccaatgga aggtgggggc agggaaggag gtagcggtga caagttccaa
 240
 tgtctggctt tccctcctgg aaaccccag ctggggctgg ccccccttc cttcctgtc
 300
 tctctcgctc aagcacgtcc cttctaagag cccctctctg cagacgcccc cagtgaacc
 360
 aagcctagat tcgctgccaa gaaggccgac attttttaga cttgccacgt taaaggggac
 420
 tgcacaggca cgactcaaa tccccccctc catgtcctcc gcctgtgcac attcaggcaa
 480
 cccgaaacac acaaagacac ggttggacac agcggccacc tgtgcacaca ggaggtagca
 540
 catggagcgc atctgacccc ggg
 563

<210> 650
 <211> 106
 <212> PRT
 <213> Homo sapiens

<400> 650
 Met His Lys His Met Cys Ser Ser Glu Thr Gln Leu Leu Pro Leu Pro
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 20 25 30
 Gly Ser Val Pro Met Ser Gln Ser Met Cys Ala Leu Ser Val Cys Leu
 35 40 45
 Ser Val Cys Gln Gln Pro Ser Arg Pro Gln Glu Gly Lys Ala Pro Met
 50 55 60
 Glu Gly Gly Gly Arg Glu Gly Gly Ser Val Asp Lys Phe Gln Cys Leu
 65 70 75 80
 Ala Phe Pro Pro Gly Asn Pro Glu Leu Gly Leu Ala Pro Pro Ser Leu
 85 90 95
 Pro Val Ser Leu Ala Gln Ala Arg Pro Phe
 100 105

<210> 651
 <211> 351
 <212> DNA
 <213> Homo sapiens

<400> 651

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 cataatggag tccatgggggt caaagttatc tcttgagct cagcagttga tggatatggg
 120
 taggtgtcag cagcggaatt gtattcccat tggagagcag cttcagtcgg tgttgggcaa
 180
 ttctggatac aagcatatga ttggactaca atcctcatct accttaggaa ccttaaacia
 240
 gtcgtctctc acaccttttc cttttagaac tggattgaca tctgggaacg tgactgaaaa
 300
 cttacaagcg tacattgata aaagtacaca actgcctggg ggagagaatt c
 351

<210> 652

<211> 95

<212> PRT

<213> Homo sapiens

<400> 652

Met	Glu	Ser	Met	Gly	Ser	Lys	Leu	Ser	Pro	Gly	Ala	Gln	Gln	Leu	Met
1				5				10					15		
Asp	Met	Val	Arg	Cys	Gln	Gln	Arg	Asn	Cys	Ile	Pro	Ile	Gly	Glu	Gln
		20					25					30			
Leu	Gln	Ser	Val	Leu	Gly	Asn	Ser	Gly	Tyr	Lys	His	Met	Ile	Gly	Leu
		35				40					45				
Gln	Ser	Ser	Ser	Thr	Leu	Gly	Thr	Leu	Asn	Lys	Ser	Ser	Ser	Thr	Pro
	50				55				60						
Phe	Pro	Phe	Arg	Thr	Gly	Leu	Thr	Ser	Gly	Asn	Val	Thr	Glu	Asn	Leu
65				70				75					80		
Gln	Ala	Tyr	Ile	Asp	Lys	Ser	Thr	Gln	Leu	Pro	Gly	Gly	Glu	Asn	
			85					90					95		

<210> 653

<211> 399

<212> DNA

<213> Homo sapiens

<400> 653

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 caccggcgga aagctgttgc tatggcaact ctgtaccgca gcatggagac cacctgtca
 120
 cactcttctc ctggagaggg agcgagcccc caaatgttcc acactgtgtc cccagggccc
 180
 cccctgtccc gccctccctg tcgagttcct octacaactc cacttaatgg gggctcctggc
 240
 tcccttcccc cagaaccacc ctcaagttcc caggccttcc ccactctagc aggccctggg
 300
 gggcttttcc cccaaggct tgctgacca gtcccttctg ggggcagtag cagcccccg
 360
 ttctctccaa ggggcaatgc cccctctcca gccccacct
 399

<210> 654

<211> 133
 <212> PRT
 <213> Homo sapiens

<400> 654
 Xaa Pro Gly Gly Ala Gly Val Gly Pro Ala Ser Glu Glu Asp Met Thr
 1 5 10 15
 Lys Leu Cys Asn His Arg Arg Lys Ala Val Ala Met Ala Thr Leu Tyr
 20 25 30
 Arg Ser Met Glu Thr Thr Cys Ser His Ser Ser Pro Gly Glu Gly Ala
 35 40 45
 Ser Pro Gln Met Phe His Thr Val Ser Pro Gly Pro Pro Ser Ala Arg
 50 55 60
 Pro Pro Cys Arg Val Pro Pro Thr Thr Pro Leu Asn Gly Gly Pro Gly
 65 70 75 80
 Ser Leu Pro Pro Glu Pro Pro Ser Val Ser Gln Ala Phe Pro Thr Leu
 85 90 95
 Ala Gly Pro Gly Gly Leu Phe Pro Pro Arg Leu Ala Asp Pro Val Pro
 100 105 110
 Ser Gly Gly Ser Ser Ser Pro Arg Phe Leu Pro Arg Gly Asn Ala Pro
 115 120 125
 Ser Pro Ala Pro Pro
 130

<210> 655
 <211> 368
 <212> DNA
 <213> Homo sapiens

<400> 655
 tgaaggaaat tctctatggc ttgtgttcat catgtagaac agcccatgag gagaatagga
 60
 gatgaggtgg gaagtgcact gggatctggg ggaagaagcc cgggggtcaa gactcagcta
 120
 ctgactgcat ggtgtcaaaag gattcgggca tctctctga ggctgagtct tcagatgaca
 180
 gtgagaacag ggacacctgc cctgcccttc tcacggggcg tgtgggcacc catgagcatg
 240
 cttgacaaat gcaaggtgcc atacaaacag gaactgcaca atctcacgc cgggcctact
 300
 cagcattgtt atttttacct ttacatctat atgaagatgt agttccattc cttttaactg
 360
 ttgttttc
 368

<210> 656
 <211> 108
 <212> PRT
 <213> Homo sapiens

<400> 656
 Met Ala Cys Val His His Val Glu Gln Pro Met Arg Arg Ile Gly Asp
 1 5 10 15
 Glu Val Gly Ser Ala Leu Gly Ser Gly Gly Arg Ser Pro Gly Phe Lys

```

      20              25              30
Thr Gln Leu Leu Thr Ala Trp Cys Gln Arg Ile Arg Ala Ser Ser Leu
      35              40              45
Arg Leu Ser Leu Gln Met Thr Val Arg Thr Gly Thr Pro Ala Leu Pro
      50              55              60
Phe Ser Arg Gly Val Trp Ala Pro Met Ser Met Leu Asp Lys Cys Lys
65              70              75              80
Val Pro Tyr Lys Gln Glu Leu His Asn Leu Thr Ala Arg Pro Thr Gln
      85              90              95
His Cys Tyr Phe Tyr Leu Tyr Ile Tyr Met Lys Met
      100              105

```

<210> 657
 <211> 330
 <212> DNA
 <213> Homo sapiens

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<400> 657
gtcgaccacg gcatgaaaaa gccgggggatg atcctcatca acaaccctg gggcgagtcc
60
aacgaggcgg gcttcaagcg cgccctcgaa gagcgtggca tggccaacgc cgggtgctgag
120
cgtattcagg acagcgacct ggacgtgggtg ccgcaattga cccgcctga aaaacgccgg
180
tgccgacacc ttgctgatgg tcggcaacgt cggcccttcg gcacaggtgg tcaagtcctt
240
ggaccgcatg ggttgggacg tgctgtggt gtctcactgg gggccggccg gnggtcgctt
300
tggcgagctg gcggggccta acgcttctcg
330

```

<210> 658
 <211> 102
 <212> PRT
 <213> Homo sapiens

```

<400> 658
Met Lys Lys Pro Gly Met Ile Leu Ile Asn Asn Pro Trp Gly Glu Ser
1      5      10      15
Asn Glu Ala Gly Phe Lys Arg Ala Leu Glu Glu Arg Gly Met Ala Asn
      20      25      30
Ala Gly Val Glu Arg Ile Gln Asp Ser Asp Leu Asp Val Val Pro Gln
      35      40      45
Leu Thr Pro Pro Glu Lys Arg Arg Cys Arg His Leu Ala Asp Gly Arg
      50      55      60
Gln Arg Arg Pro Phe Gly Thr Gly Gly Gln Val Pro Gly Pro His Gly
65      70      75      80
Leu Gly Arg Ala Cys Gly Val Ser Leu Gly Ala Gly Arg Xaa Ser Leu
      85      90      95
Trp Arg Ala Gly Gly Ala
      100

```

<210> 659
 <211> 1505

<212> DNA

<213> Homo sapiens

<400> 659

gccaggatca tgtccaccac cacatgccaa gtggtggcgt tcttcctgtc catcctgggg
60
ctggccggct gcatcgcggc caccgggatg gacatgtgga gcaccagga cctgtacgac
120
aaccctgtca cctcctgtgt ccagtagcaa gggctctgga ggagctgcgt gaggcagagt
180
tcaggcttca ccgaatgcag gccctatttc accatcctgg gacttccagc catgctgcag
240
gcagtgcgag cctgatgat cgtaggcatc gtcttgggtg ccattggcct cctgggtatcc
300
atctttgccc tgaaatgcat ccgcattggc agcatggagg actctgccaa agccaacatg
360
acactgacct ccgggatcat gttcattgtc tcagggtctt gtgcaattgc tggagtgtct
420
gtgtttgcc aatgctggt gactaacttc tggatgtcca cagctaacat gtacaccggc
480
atgggtggga tgggtgcagac tgttcagacc aggtacacat ttgggtgcgc tctgttcgtg
540
ggctgggtcg ctggaggcct cacactaatt ggggtgtgta tgatgtgcat cgcttgcgg
600
ggcctggcac cagaagaaac caactacaaa gccgtttctt atcatgcctc aggccacagt
660
gttgccctaca agcctggagg cttcaaggcc agcactggct ttgggtccaa caccaaaaac
720
aagaagatat acgatggagg tgcccgacac gaggacgagg tacaatctta tctttccaag
780
cacgactatg tgtaatgctc taagacctct cagcacgggc ggaagaaact cccggagagc
840
tcacccaaaa aacaaggaga tcccatctag attttcttct gcttttgact cacagctgga
900
agttagaaaa gcctcgattt catctttgga gaggccaagt ggtcttagcc tcagtctctg
960
tctctaaata ttccaccata aaacagctga gttatttatg aattagaagc tatagctcac
1020
attttcaatc ctctatttct ttttttaaat ataactttct actctgatga gagaatgtgg
1080
ttttaatctc tctctcacat tttgatgatt tagacagact cccctcttc ctctagtca
1140
ataaacccat tgatgatcta tttcccagct tatccccaag aaaacttttg aaaggaaaga
1200
gtagacccaa agatgttatt ttctgctgtt tgaattttgt ctccccaccc ccaacttggc
1260
tagtaataaa cacttactga agaagaagca ataagagaaa gatatttgta atctctccag
1320
cccatgatct cggttttctt aactgtgat cttaaaagtt accaaaccaa agtcattttc
1380
agtttgaggc aaccaaacct ttctactgct gttgacatct tcttattaca gcaacacat
1440
tctaggagtt tctgagctc tccactggag tcttccctt ctgtcgtctt ctgcagcgg
1500

tacc

1505

<210> 660

<211> 261

<212> PRT

<213> Homo sapiens

<400> 660

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Met Ser Thr Thr Thr Cys Gln Val Val Ala Phe Leu Leu Ser Ile Leu
 1           5           10          15
Gly Leu Ala Gly Cys Ile Ala Ala Thr Gly Met Asp Met Trp Ser Thr
      20           25           30
Gln Asp Leu Tyr Asp Asn Pro Val Thr Ser Val Phe Gln Tyr Glu Gly
      35           40           45
Leu Trp Arg Ser Cys Val Arg Gln Ser Ser Gly Phe Thr Glu Cys Arg
      50           55           60
Pro Tyr Phe Thr Ile Leu Gly Leu Pro Ala Met Leu Gln Ala Val Arg
      65           70           75           80
Ala Leu Met Ile Val Gly Ile Val Leu Gly Ala Ile Gly Leu Leu Val
      85           90           95
Ser Ile Phe Ala Leu Lys Cys Ile Arg Ile Gly Ser Met Glu Asp Ser
      100          105          110
Ala Lys Ala Asn Met Thr Leu Thr Ser Gly Ile Met Phe Ile Val Ser
      115          120          125
Gly Leu Cys Ala Ile Ala Gly Val Ser Val Phe Ala Asn Met Leu Val
      130          135          140
Thr Asn Phe Trp Met Ser Thr Ala Asn Met Tyr Thr Gly Met Gly Gly
      145          150          155          160
Met Val Gln Thr Val Gln Thr Arg Tyr Thr Phe Gly Ala Ala Leu Phe
      165          170          175
Val Gly Trp Val Ala Gly Gly Leu Thr Leu Ile Gly Gly Val Met Met
      180          185          190
Cys Ile Ala Cys Arg Gly Leu Ala Pro Glu Glu Thr Asn Tyr Lys Ala
      195          200          205
Val Ser Tyr His Ala Ser Gly His Ser Val Ala Tyr Lys Pro Gly Gly
      210          215          220
Phe Lys Ala Ser Thr Gly Phe Gly Ser Asn Thr Lys Asn Lys Lys Ile
      225          230          235          240
Tyr Asp Gly Gly Ala Arg Thr Glu Asp Glu Val Gln Ser Tyr Pro Ser
      245          250          255
Lys His Asp Tyr Val
      260

```

<210> 661

<211> 451

<212> DNA

<213> Homo sapiens

<400> 661

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nnacgcgtgt agtttgtgta tcggcgcgga actcgccgcg tctgatctcg aggagcttcc
60
cccatggacg agattttaac cttgcttgcc ggaggcggtg acgacgagcc agagtggcat
120

```

gacaaggcat tatgtgcca gactgatccg gaggcattct tccctgaaaa ggggtggatcc
 180
 acccgtgagg ccaagcgcac ctgtgagtc tgtgaggtcc gccaggagt cttggagtag
 240
 gcccttgcca atgacgagag gtccggaatc tggggcggat tgtccgagat ggagaggcgt
 300
 cggctgcgca agcggggcgt acctgacgtc ggagcgcggg tattgacacg gcccggtaaa
 360
 atgccctgtc tgcccgggat ggctgtctgc acgatgcggc atatgcgatg atcgacagacg
 420
 tgggtgtgcat cccgtgtctc atgacgtcga c
 451

<210> 662

<211> 85

<212> PRT

<213> Homo sapiens

<400> 662

Met	Asp	Glu	Ile	Leu	Thr	Leu	Leu	Ala	Gly	Gly	Gly	Asp	Asp	Glu	Pro
1				5					10					15	
Glu	Trp	His	Asp	Lys	Ala	Leu	Cys	Ala	Gln	Thr	Asp	Pro	Glu	Ala	Phe
			20					25					30		
Phe	Pro	Glu	Lys	Gly	Gly	Ser	Thr	Arg	Glu	Ala	Lys	Arg	Ile	Cys	Glu
			35				40						45		
Ser	Cys	Glu	Val	Arg	Gln	Glu	Cys	Leu	Glu	Tyr	Ala	Leu	Ala	Asn	Asp
			50				55					60			
Glu	Arg	Phe	Gly	Ile	Trp	Gly	Gly	Leu	Ser	Glu	Met	Glu	Arg	Arg	Arg
65					70					75				80	
Leu	Arg	Lys	Arg	Ala											

<210> 663

<211> 552

<212> DNA

<213> Homo sapiens

<400> 663

ctcgagcgtc tcgacgccga cgccgcccag ggagccaagg aagacctctc gcagcgcgac
 60
 ccctacgacg tgctcgtcgt agggggcggg cccgcgggtg ccgcggccgc cgtgtacgcg
 120
 gctcgtaagg gcattcgcac cgccatggtc gggctctcga tcggcggcca ggtactcgat
 180
 accgaggcca tcgacaacct catctcgggt ccgcacacca ccggtccgcg tctggccgac
 240
 gccctccgca gccacgtcaa cgactacaac attgacgtta ttgagcgtca gaccgccagc
 300
 gccatagaga ccaccggcgg tatgaccacc gtgcatctga ccgacggcga cctgcggggc
 360
 cgctcagtca tcgtggccac cgggtgccgc tggcgcaacc ttggcgtacc tggcgaggag
 420
 gaataccgca ccaagggtgt gacctactgc ccgcactgcg atggcccgtc attcacaggc
 480

aaaaagggtgg ccgtcgtcgg aggtggaaac tccggtattg aggccgctat cgacctcgcc
 540
 ggcgctcgtcg ac
 552

<210> 664
 <211> 184
 <212> PRT
 <213> Homo sapiens

<400> 664
 Leu Glu Arg Leu Asp Ala Asp Ala Ala Gln Gly Ala Lys Glu Asp Leu
 1 5 10 15
 Ser Gln Arg Asp Pro Tyr Asp Val Leu Val Val Gly Ala Gly Pro Ala
 20 25 30
 Gly Ala Ala Ala Ala Val Tyr Ala Ala Arg Lys Gly Ile Arg Thr Ala
 35 40 45
 Met Val Gly Ser Arg Ile Gly Gly Gln Val Leu Asp Thr Glu Ala Ile
 50 55 60
 Asp Asn Leu Ile Ser Val Pro His Thr Thr Gly Pro Arg Leu Ala Asp
 65 70 75 80
 Ala Leu Arg Ser His Val Asn Asp Tyr Asn Ile Asp Val Ile Glu Arg
 85 90 95
 Gln Thr Ala Ser Ala Ile Glu Thr Thr Gly Gly Met Thr Thr Val His
 100 105 110
 Leu Thr Asp Gly Asp Leu Arg Ala Arg Ser Val Ile Val Ala Thr Gly
 115 120 125
 Ala Arg Trp Arg Asn Leu Gly Val Pro Gly Glu Glu Glu Tyr Arg Thr
 130 135 140
 Lys Gly Val Thr Tyr Cys Pro His Cys Asp Gly Pro Leu Phe Thr Gly
 145 150 155 160
 Lys Lys Val Ala Val Val Gly Gly Gly Asn Ser Gly Ile Glu Ala Ala
 165 170 175
 Ile Asp Leu Ala Gly Val Val Asp
 180

<210> 665
 <211> 352
 <212> DNA
 <213> Homo sapiens

<400> 665
 acgcgtacag ttcgccgtcg aggttgaaca ccacgatcgg tgtaccgggtc acttcgtcga
 60
 acacgctctt catttcgccc ggcagcagtt cggcgccggc gcagacaaag gtccaggcct
 120
 cgctcacgcg gtggccccgg ccagcggcctt ttccaggatc tcgaaacgca ggctcgtcgcg
 180
 cttgggggatg ccgaatcggt cgtcgccata cgggaacggc ttcttgatgc cgggtgcgcag
 240
 gtagccgcgg cgctcgtaga agcgatcaga tcgcgcgcac gtcgatcact gtcattctgca
 300
 ttaccggcac gttccattcg cgcgcggcgt gggcttcggc ggcgtccatc aa
 352

<210> 666
 <211> 105
 <212> PRT
 <213> Homo sapiens

<400> 666
 Met Glu Arg Ala Gly Asn Ala Asp Asp Ser Asp Arg Arg Ala Arg Asp
 1 5 10 15
 Leu Ile Ala Ser Thr Ser Ala Ala Ala Thr Cys Ala Pro Ala Ser Arg
 20 25 30
 Ser Arg Ser Arg Met Ala Thr Asn Asp Ser Ala Ser Pro Ser Ala Thr
 35 40 45
 Thr Cys Val Ser Arg Ser Trp Lys Ser Arg Trp Pro Gly Pro Pro Arg
 50 55 60
 Glu Arg Gly Leu Asp Leu Cys Leu Arg Arg Arg Arg Thr Ala Ala Gly
 65 70 75 80
 Arg Asn Glu Glu Arg Val Arg Arg Ser Asp Arg Tyr Thr Asp Arg Gly
 85 90 95
 Val Gln Pro Arg Arg Arg Thr Val Arg
 100 105

<210> 667
 <211> 391
 <212> DNA
 <213> Homo sapiens

<400> 667
 nacgcgtacg aatcggtgtt gcgtcgcaac ccaggggagg ccgagttcca ccaggctgtg
 60
 cgggagatct ttgaatctct cggcccggtg ctgcacaaga atccgcagta cgtggaggca
 120
 gccgtgttgt cgcgcatctg cgaaccggaa cgccagatca ttttcgggt gccgtgggtt
 180
 gacgacgagg gcaagatccg tatcaaccgt ggcttcgcg ttgaatatc gtcggtactg
 240
 gggccgtata aggggtggatt gcgattccac ccctcgggtg acttaggaac gattaagttc
 300
 cttggttttg agcagatctt caaaaatgct ctgactggca tgccgatcgg tggcgcaag
 360
 ggtgggtcgg actttgatcc ccatgacgcg t
 391

<210> 668
 <211> 130
 <212> PRT
 <213> Homo sapiens

<400> 668
 Xaa Ala Tyr Glu Ser Val Leu Arg Arg Asn Pro Gly Glu Ala Glu Phe
 1 5 10 15
 His Gln Ala Val Arg Glu Ile Phe Glu Ser Leu Gly Pro Val Leu Asp
 20 25 30
 Lys Asn Pro Gln Tyr Val Glu Ala Ala Val Leu Ser Arg Ile Cys Glu

35 40 45
 Pro Glu Arg Gln Ile Ile Phe Arg Val Pro Trp Val Asp Asp Glu Gly
 50 55 60
 Lys Ile Arg Ile Asn Arg Gly Phe Arg Val Glu Tyr Ser Ser Val Leu
 65 70 75 80
 Gly Pro Tyr Lys Gly Gly Leu Arg Phe His Pro Ser Val Tyr Leu Gly
 85 90 95
 Thr Ile Lys Phe Leu Gly Phe Glu Gln Ile Phe Lys Asn Ala Leu Thr
 100 105 110
 Gly Met Pro Ile Gly Gly Ala Lys Gly Gly Ser Asp Phe Asp Pro His
 115 120 125
 Asp Ala
 130

<210> 669

<211> 707

<212> DNA

<213> Homo sapiens

<400> 669

nngagtccgt tccccgtcta agctcatcgt ggtggtgctg gcatggcgt caacaagga
 60
 attgagaaca cccttgctgc cttcgccac gcggtcgagg tgggatgcac ctacctgaa
 120
 actgacgttc acgcgaccag cgacggggtg ctagtggcct tccacgatcc gatactgat
 180
 cggtcactg aatcaggcgg agtcatcgcc gccatgccgt ggcacaaggt caaacaagcc
 240
 aagggttggtg gcgaaccgat cccacctta gatgagattt tcgacgcctt tcccgacgag
 300
 ttcatacaata tcgacatcaa gcatgatggc gccaccatgc cgctcatcga cgttctttcc
 360
 cgtcacccgg cttggagtcg ggtttgcgtc gggtcgttca gcagtaaag catccagacc
 420
 ttccgtcgcc tgggttcagg acgcactgcg actgcagtgg ggtcggtggg agtcnnggt
 480
 gggctgtcat cagccctcat agcatgcaga tggcacagtc ccatgggaat gcgtaccagg
 540
 tgccgcaccg cttgaccgg tnatggggtg ccccttgtga caccgacctt cattaagct
 600
 gccatcgtc aggggcgagc tgttcatgtc tggacgggta atgagatctc tgaggctcga
 660
 gaactgatgg atatgggggt cgacggcatc gtcacagatc gtccgga
 707

<210> 670

<211> 170

<212> PRT

<213> Homo sapiens

<400> 670

Met Ala Val Asn Lys Gly Ile Glu Asn Thr Leu Ala Ala Phe Gly His
 1 5 10 15
 Ala Val Glu Val Gly Cys Thr Tyr Leu Glu Thr Asp Val His Ala Thr

```

      20      25      30
Ser Asp Gly Val Leu Val Ala Phe His Asp Pro Ile Leu Asp Arg Val
      35      40      45
Thr Glu Ser Gly Gly Val Ile Ala Ala Met Pro Trp His Lys Val Lys
      50      55      60
Gln Ala Lys Val Gly Gly Glu Pro Ile Pro Thr Leu Asp Glu Ile Phe
      65      70      75      80
Asp Ala Phe Pro Asp Ala Phe Ile Asn Ile Asp Ile Lys His Asp Gly
      85      90      95
Ala Thr Met Pro Leu Ile Asp Val Leu Ser Arg His Arg Ala Trp Ser
      100      105      110
Arg Val Cys Val Gly Ser Phe Ser Ser Lys Arg Ile Gln Thr Phe Arg
      115      120      125
Arg Leu Val Gln Gly Arg Thr Ala Thr Ala Val Gly Ser Val Gly Val
      130      135      140
Xaa Ala Gly Leu Ser Ser Ala Leu Ile Ala Cys Arg Trp His Ser Pro
      145      150      155      160
Met Gly Met Arg Thr Arg Cys Arg Thr Ala
      165      170

```

<210> 671

<211> 444

<212> DNA

<213> Homo sapiens

<400> 671

```

acgcgtgggc ctcggggttg atgggatcag aaggggacgg gacctgtaga aaggggcctg
60
cagctcagag catggggcgg ccttggtcca ctacgcctgc agctgtgaat tcgttctccg
120
gtgctggaga gggatctggt tatctccatt ctcttgcttc cacgtggaaa ggaaggacgt
180
gcgctctcat cctacgtgtt ttgagaaatc gcattgtccc cagctctgcg ggaggatctg
240
gggacgcagt ggggaaccag acaggcagtt ggagggtctag tgcgcgccag aagccagttc
300
ccacccaggg tgccatttgc tgggcgccct agggagctgc gtgggcatcc agaggagtga
360
gtcgccccct gctctgtcca gtgcccaatt ccccgggcag ggcaggcgtt attaacgtag
420
agggagaaca cccatgcaca caac
444

```

<210> 672

<211> 103

<212> PRT

<213> Homo sapiens

<400> 672

```

Met Gly Ser Glu Gly Asp Gly Thr Cys Arg Lys Gly Pro Ala Ala Gln
1      5      10      15
Ser Met Gly Arg Pro Trp Leu Thr Thr Pro Ala Ala Val Asn Ser Phe
      20      25      30
Ser Gly Ala Gly Glu Gly Ser Gly Tyr Leu His Ser Leu Val Ser Thr

```

```

      35          40          45
Trp Lys Gly Arg Thr Cys Ala Leu Ile Leu Arg Val Leu Arg Asn Arg
  50          55          60
Ile Val Pro Ser Ser Ala Gly Gly Ser Gly Asp Ala Val Gly Asn Gln
  65          70          75          80
Thr Gly Ser Trp Arg Ser Ser Ala Arg Gln Lys Pro Val Pro Thr Gln
      85          90          95
Gly Ala Ile Cys Trp Ala Pro
      100

```

<210> 673

<211> 452

<212> DNA

<213> Homo sapiens

<400> 673

```

acgcgtccct gcagaaatcc tctcggccta ggatcatccgc aagatgtggc agggcatgca
  60
ccgtgaaagc cttcaagtct gccgcagcaa gaccgcacgc ctgctgaaat tcgcagttgt
  120
gccgcgggtcc ctgatgcgga caaactcggc caccacgac agcctgacgc ttgcggacca
  180
acgttcaaact actgtgcact tgaaacgtcc gggccgcac accctgggtga ctttgtgcga
  240
ccgacattac ttatgttcac gctctttcag ttcttgtcaa taccgtatatt ttgcgtgacg
  300
tctccatcag aaaaatgtcg gtgttaccgc accgcagacg atgcgtaccc ttgcgctgac
  360
gatggaggcc ttgaaaagtg cattagccac tactggggcga atctacggca aaaagctgtt
  420
actaggcggg gattggggag gcccgtagtg gc
  452

```

<210> 674

<211> 134

<212> PRT

<213> Homo sapiens

<400> 674

```

Met Trp Gln Gly Met His Arg Glu Ser Leu Gln Val Cys Arg Ser Lys
  1          5          10          15
Thr Ala Arg Leu Leu Lys Phe Ala Val Val Pro Arg Ser Leu Met Arg
      20          25          30
Thr Asn Ser Ala Thr Thr Ile Ser Leu Thr Leu Ala Asp Gln Arg Ser
      35          40          45
Asn Thr Val His Leu Lys Arg Pro Gly Arg Ile Thr Trp Val Thr Leu
      50          55          60
Cys Asp Arg His Tyr Leu Cys Ser Arg Ser Phe Ser Ser Cys Gln Tyr
      65          70          75          80
Arg Ile Phe Arg Arg Arg Leu His Gln Lys Asn Val Gly Val Thr Ala
      85          90          95
Pro Gln Thr Met Arg Thr Leu Ala Leu Thr Met Glu Ala Leu Lys Ser
      100          105          110
Ala Leu Ala Thr Thr Gly Arg Ile Tyr Gly Lys Lys Leu Leu Leu Gly

```


115
Gly Asp Trp Gly Gly Pro
130

120

125

<210> 675

<211> 8564

<212> DNA

<213> Homo sapiens

<400> 675

atgtcgggct ccacacagct tgtggcacag acgtggaggg ccactgagcc ccgctacccg
60

ccccacagcc ttctctaccc agtgcagatc gcccggacgc acacggacgt cgggctcctg
120

gagtaccagc accactcccg cgactatgcc tcccacctgt cgccgggctc catcatccag
180

ccccagcggc ggaggccctc cctgctgtct gagttccagc ccgggaatga acggtcccag
240

gagctccacc tgccggccaga gtccactca tacctgcccg agctggggaa gtcagagatg
300

gagttcattg aaagcaagcg ccctcggcta gagctgctgc ctgacccctt gctgcgaccg
360

tcacccctgc tggccacggg ccagcctgcg ggatctgaag acctcaccaa ggaccgtagc
420

ctgacgggca agctggaacc ggtgtctccc ccagccccc cgcacactga ccctgagctg
480

gagctggtgc cgccacggct gtccaaggag gagctgatcc agaacatgga ccgctgggac
540

cgagagatca ccatggtaga gcagcagatc tctaagctga agaagaagca gcaacagctg
600

gaggaggagg ctgccaagcc gcccagacct gagaagcccg tgtcaccgcc gcccatcgag
660

tcgaagcacc gcagcctggt gcagatcatc tacgacgaga accggaagaa ggctgaagct
720

gcacatcgga ttctggaagg cctggggccc caggtggagc tgccgctgta caaccagccc
780

tccgacaccc ggcagtatca tgagaacatc aaaataaacc aggcgatgcg gaagaagcta
840

atcttgact tcaagaggag gaatcacgct cggaacaat gggagcagaa gttctgccag
900

cgctatgacc agctcatgga ggcctgggaa aaaaagggtg agcgcatcga gaacaacccc
960

cgccggcggg ccaaggagag caaggcgcg gagtactacg aaaagcagtt ccctgagatc
1020

cgcaagcagc gcgagctgca ggagcgcatg cagggcaggg tgggccagcg gggcagtggg
1080

ctgtccatgt cggccgccc cagcagcac gaggtgtcag agatcatcga tggcctctca
1140

gagcaggaga acctggagaa gcagatgcgc cagctggccg tgatcccgcc catgctgtac
1200

gacgtgacc agcagcgcat caagttcatc aacatgaacg ggcttatggc cgaccccatg
1260

aagggtgtaca aagaccgcca ggtcatgaac atgtggagtg agcaggagaa ggagaccttc
1320

cgggagaagt tcatgcagca tcccaagaac tttggcctga tcgcatcatt cctggagagg
1380
aagacagtgg ctgagtgcgt cctctattac tacctgacta agaagaatga gaactataag
1440
agcctggtga gacggagcta tcggcgccgc ggcaagagcc agcagcagca acaacagcag
1500
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<211> 2518

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<400> 676

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			20					25					30		
Thr	His	Thr	Asp	Val	Gly	Leu	Leu	Glu	Tyr	Gln	His	His	Ser	Arg	Asp
		35				40						45			
Tyr	Ala	Ser	His	Leu	Ser	Pro	Gly	Ser	Ile	Ile	Gln	Pro	Gln	Arg	Arg
	50					55					60				
Arg	Pro	Ser	Leu	Leu	Ser	Glu	Phe	Gln	Pro	Gly	Asn	Glu	Arg	Ser	Gln
65				70					75					80	
Glu	Leu	His	Leu	Arg	Pro	Glu	Ser	His	Ser	Tyr	Leu	Pro	Glu	Leu	Gly
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Lys	Ser	Glu	Met	Glu	Phe	Ile	Glu	Ser	Lys	Arg	Pro	Arg	Leu	Glu	Leu
			100					105					110		
Leu	Pro	Asp	Pro	Leu	Leu	Arg	Pro	Ser	Pro	Leu	Leu	Ala	Thr	Gly	Gln
		115				120						125			
Pro	Ala	Gly	Ser	Glu	Asp	Leu	Thr	Lys	Asp	Arg	Ser	Leu	Thr	Gly	Lys
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Leu	Glu	Pro	Val	Ser	Pro	Ser	Pro	Pro	His	Thr	Asp	Pro	Glu	Leu	
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Glu	Leu	Val	Pro	Pro	Arg	Leu	Ser	Lys	Glu	Glu	Leu	Ile	Gln	Asn	Met

783

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 Lys Lys Gly Leu Leu Glu His Gly Arg Asn Trp Ser Ala Ile Ala Arg
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 Tyr Lys Lys Arg Gln Asn Leu Asp Glu Ile Leu Gln Gln His Lys Leu
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 Lys Met Glu Lys Glu Arg Asn Ala Arg Arg Lys Lys Lys Lys Ala Pro
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Gln Glu Ile Asn Lys	Lys Leu Asn Thr His	Asn Arg Asn Glu Pro Glu
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Tyr Asn Ile Ser Gln	Pro Gly Thr Glu Ile	Phe Asn Met Pro Ala Ile
2305	2310	2315
Thr Gly Thr Gly Leu	Met Thr Tyr Arg Ser	Gln Ala Val Gln Glu His

2325 2330 2335
 Ala Ser Thr Asn Met Gly Leu Glu Ala Ile Ile Arg Lys Ala Leu Met
 2340 2345 2350
 Gly Lys Tyr Asp Gln Trp Glu Glu Ser Pro Pro Leu Ser Ala Asn Ala
 2355 2360 2365
 Phe Asn Pro Leu Asn Ala Ser Ala Ser Leu Pro Ala Ala Met Pro Ile
 2370 2375 2380
 Thr Ala Ala Asp Gly Arg Ser Asp His Thr Leu Thr Ser Pro Gly Gly
 2385 2390 2395 2400
 Gly Gly Lys Ala Lys Val Ser Gly Arg Pro Ser Ser Arg Lys Ala Lys
 2405 2410 2415
 Ser Pro Ala Pro Gly Leu Ala Ser Gly Asp Arg Pro Pro Ser Val Ser
 2420 2425 2430
 Ser Val His Ser Glu Gly Asp Cys Asn Arg Arg Thr Pro Leu Thr Asn
 2435 2440 2445
 Arg Val Trp Glu Asp Arg Pro Ser Ser Ala Gly Ser Thr Pro Phe Pro
 2450 2455 2460
 Tyr Asn Pro Leu Ile Met Arg Leu Gln Ala Gly Val Met Ala Ser Pro
 2465 2470 2475 2480
 Pro Pro Pro Gly Leu Pro Ala Gly Ser Gly Pro Leu Ala Gly Pro His
 2485 2490 2495
 His Ala Trp Asp Glu Glu Pro Lys Pro Leu Leu Cys Ser Gln Tyr Glu
 2500 2505 2510
 Thr Leu Ser Asp Ser Glu
 2515

<210> 677
 <211> 345
 <212> DNA
 <213> Homo sapiens

<400> 677
 gtaatgcaag gtgaacgccc aatggctgcg cagaacaaga gcattgggtca gttcaccctt
 60
 gagggatatag ctccggcacg ccgtgggtgtt ccacagattg aagttacttt cgatatcgat
 120
 gccaacggta tcttgaatgt gagcgcaaag gataaggcta ccggttaagga acagaagatt
 180
 cgcacgaag cttcaagtgg tttagtcag gaagaaatcg acagaatgaa agctgaggca
 240
 gaacagaatg cagcagcagg caaggctgaa cgcgaaaaga ttgataagct gaaccaagct
 300
 gactcaatga tttccccccc cgaaaactcc tgaaagacaa cgatn
 345

<210> 678
 <211> 110
 <212> PRT
 <213> Homo sapiens

<400> 678
 Val Met Gln Gly Glu Arg Pro Met Ala Ala Gln Asn Lys Ser Ile Gly
 1 5 10 15
 Gln Phe Thr Leu Glu Gly Ile Ala Pro Ala Arg Arg Gly Val Pro Gln

```

      20      25      30
Ile Glu Val Thr Phe Asp Ile Asp Ala Asn Gly Ile Leu Asn Val Ser
      35      40      45
Ala Lys Asp Lys Ala Thr Gly Lys Glu Gln Lys Ile Arg Ile Glu Ala
      50      55      60
Ser Ser Gly Leu Ser Gln Glu Glu Ile Asp Arg Met Lys Ala Glu Ala
      65      70      75      80
Glu Gln Asn Ala Ala Ala Gly Lys Ala Glu Arg Glu Lys Ile Asp Lys
      85      90      95
Leu Asn Gln Ala Asp Ser Met Ile Ser Pro Pro Glu Asn Ser
      100      105      110

```

<210> 679

<211> 362

<212> DNA

<213> Homo sapiens

<400> 679

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acgcgtgacg tcaccgctcc atggggaaga tgacgactat ccctgtgaaa gtaaagcata
60
atgggaaaaa tgtacgttaa atgtgctaac gcgcagtatg atgtatctat gaatcttgag
120
ggtacaggcc tggatttcaa gcgtgccatt gctgacgtca cgcattgtgcc acccgaacgc
180
caaaaagtac tcatcaaggg aggattgcta aaagacgata cccattagg taaagtgggt
240
gcgcgtgcag gacagcagtt catggtgctg ggtgctgtgg gtgagctgcc caaggcccca
300
gaaaaacctg tgctgttctt ggaggatttg ccggaagacg agctcaacaa ggctaaggat
360
cc
362

```

<210> 680

<211> 100

<212> PRT

<213> Homo sapiens

<400> 680

```

Met Gly Lys Met Tyr Val Lys Cys Ala Asn Ala Gln Tyr Asp Val Ser
  1      5      10      15
Met Asn Leu Glu Gly Thr Gly Leu Asp Phe Lys Arg Ala Ile Ala Asp
      20      25      30
Val Thr His Val Pro Pro Glu Arg Gln Lys Val Leu Ile Lys Gly Gly
      35      40      45
Leu Leu Lys Asp Asp Thr Pro Leu Gly Lys Val Gly Ala Arg Ala Gly
      50      55      60
Gln Gln Phe Met Val Leu Gly Ala Val Gly Glu Leu Pro Lys Ala Pro
      65      70      75      80
Glu Lys Pro Val Leu Phe Leu Glu Asp Leu Pro Glu Asp Glu Leu Asn
      85      90      95
Lys Ala Lys Asp
      100

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<210> 681
 <211> 357
 <212> DNA
 <213> Homo sapiens

<400> 681
 acgcgtccaa atggacaaac gcttgatgat ttctaccatg aaattagagc aaaatatcca
 60
 gaacaattac tgatggcaga ctgttcaaca gtagaagaaa tgattcacgc tgatgaactc
 120
 ggttttgatt ttatcggaag tacttttagta ggatatacaa aacaaagtaa aggtgacaaa
 180
 atcgaagaaa atgactttga aatcttgaga acagtttttag aacgaattaa acatccacta
 240
 attgcagaag gcaatatcga tacacctgaa aaggtgaaac gtgtgcttga gttaggcgcg
 300
 tatagtgtcg ttgtagggtc agcgattact cgtccacaac tcatcacgaa aaaattt
 357

<210> 682
 <211> 119
 <212> PRT
 <213> Homo sapiens

<400> 682
 Thr Arg Pro Asn Gly Gln Thr Leu Asp Asp Phe Tyr His Glu Ile Arg
 1 5 10 15
 Ala Lys Tyr Pro Glu Gln Leu Leu Met Ala Asp Cys Ser Thr Val Glu
 20 25 30
 Glu Met Ile His Ala Asp Glu Leu Gly Phe Asp Phe Ile Gly Ser Thr
 35 40 45
 Leu Val Gly Tyr Thr Lys Gln Ser Lys Gly Asp Lys Ile Glu Glu Asn
 50 55 60
 Asp Phe Glu Ile Leu Arg Thr Val Leu Glu Arg Ile Lys His Pro Leu
 65 70 75 80
 Ile Ala Glu Gly Asn Ile Asp Thr Pro Glu Lys Val Lys Arg Val Leu
 85 90 95
 Glu Leu Gly Ala Tyr Ser Val Val Val Gly Ser Ala Ile Thr Arg Pro
 100 105 110
 Gln Leu Ile Thr Lys Lys Phe
 115

<210> 683
 <211> 411
 <212> DNA
 <213> Homo sapiens

<400> 683
 ntctccgacc gcgtggtaaa actggcgacc ttaattgctg aagatgagca agctgaaatg
 60
 aatattgttt tgcccgcagc gtggttgcatt gattgcgtca gttaccctaa aaaccatgta
 120
 ttaagagcac aaagtgcatt acatgcagca gataaagcga ttgtattttt gcgcagtatt
 180

aattacccca aacaatactt attagcaatt catcatgcaa tttcagcgca cagtgtcagt
 240
 ggtaaaatac aggcaatgag tttagaagct caaatagtgc aagatgcaga tagattggat
 300
 gcgctagggg caattggcgt ggctcgttgc attcaagtaa gtagccagtt acagcgccca
 360
 ctatattctg aagttgaccc cttcagcgag acacgatctc tagtctgcat g
 411

<210> 684
 <211> 137
 <212> PRT
 <213> Homo sapiens

<400> 684
 Xaa Ser Asp Arg Val Val Lys Leu Ala Thr Leu Ile Ala Glu Asp Glu
 1 5 10 15
 Gln Ala Glu Met Asn Ile Val Leu Pro Ala Ala Trp Leu His Asp Cys
 20 25 30
 Val Ser Tyr Pro Lys Asn His Val Leu Arg Ala Gln Ser Ala Leu His
 35 40 45
 Ala Ala Asp Lys Ala Ile Val Phe Leu Arg Ser Ile Asn Tyr Pro Lys
 50 55 60
 Gln Tyr Leu Leu Ala Ile His His Ala Ile Ser Ala His Ser Val Ser
 65 70 75 80
 Gly Lys Ile Gln Ala Met Ser Leu Glu Ala Gln Ile Val Gln Asp Ala
 85 90 95
 Asp Arg Leu Asp Ala Leu Gly Ala Ile Gly Val Ala Arg Cys Ile Gln
 100 105 110
 Val Ser Ser Gln Leu Gln Arg Pro Leu Tyr Ser Glu Val Asp Pro Phe
 115 120 125
 Ser Glu Thr Arg Ser Leu Val Cys Met
 130 135

<210> 685
 <211> 417
 <212> DNA
 <213> Homo sapiens

<400> 685
 acgcgttgcg ttgcggagtg aaccggaac gatggatgga ttgacactat tcggcctggt
 60
 cgccgtcact gcgatgctgg tctgctatgc catggaggac cgcagccact gggtcgtgct
 120
 gctgttcgcg gccgcttggc gctcggttcg gcctacggct tcctccaagg cgcttgccg
 180
 ttccgcttcg tcgaggcgat atgggcgctc gttgcctgcg gcgtggtgga cgatcaggcc
 240
 gcgatgaccg catcgtccgg cttaagcccg gaaacgaaac cgaccagtgc gctggtttga
 300
 tggggcggcg gtcgctggat gcacagcgtc tcgacgcgag cgtgatgatg gcctcagcgc
 360
 gtgcatgccg acgctgtcgc tcctcgcgct acgctcgacc acggcgcgcg gcaatag
 417

<210> 686
 <211> 110
 <212> PRT
 <213> Homo sapiens

<400> 686
 Met Pro Trp Arg Thr Ala Ala Thr Gly Ser Cys Cys Cys Ser Arg Pro
 1 5 10 15
 Leu Gly Ala Arg Phe Gly Leu Arg Leu Pro Pro Arg Arg Leu Ala Val
 20 25 30
 Arg Leu Arg Arg Gly Asp Met Gly Ala Arg Cys Leu Arg Arg Gly Gly
 35 40 45
 Arg Ser Gly Arg Asp Asp Arg Ile Val Arg Leu Lys Pro Gly Asn Glu
 50 55 60
 Thr Asp Gln Cys Ala Gly Leu Met Gly Gly Ala Ser Leu Asp Ala Gln
 65 70 75 80
 Arg Leu Asp Ala Ser Val Met Met Ala Ser Ala Arg Ala Cys Arg Arg
 85 90 95
 Cys Arg Ser Ser Arg Tyr Ala Arg Pro Arg Arg Ala Ala Ile
 100 105 110

<210> 687
 <211> 412
 <212> DNA
 <213> Homo sapiens

<400> 687
 nnacgcgtga ccgaccaact gcgagccacc ctgctcgcca tggctgctat ggggttgca
 60
 gacggcatcg atattccgtc tggggcgatt attgaaagct gccgcacett atcagccggt
 120
 ctcgatgaaa cccacggtgg tcgcacgata gagcttcggg taccacctgc gtgcgcggtt
 180
 caattggcgg ccattgagtc gggccccaac caccaccggg gcactccgcc caatgtggcc
 240
 gagaccgacc ctgtcacctt cctgcagttg gcaactggct tctcacactg gccagaaatg
 300
 cgctcagcag gacgggttca ggcgtctgga tccacgctc acgacgttgc tggcgtgttc
 360
 ccagtcggtg atatggccgg ggttttccgc gacatttttg ccgacgacta ga
 412

<210> 688
 <211> 136
 <212> PRT
 <213> Homo sapiens

<400> 688
 Xaa Arg Val Thr Asp Gln Leu Arg Ala Thr Leu Leu Ala Met Ala Ala
 1 5 10 15
 Met Gly Leu His Asp Gly Ile Asp Ile Pro Ser Gly Ala Ile Ile Glu
 20 25 30
 Ser Cys Arg Thr Leu Ser Ala Val Leu Asp Glu Thr His Gly Gly Arg


```

      35              40              45
Thr Ile Glu Leu Arg Val Pro Pro Ala Cys Ala Val Gln Leu Ala Ala
      50              55              60
Ile Glu Ser Gly Pro Asn His His Arg Gly Thr Pro Pro Asn Val Ala
65      70      75      80
Glu Thr Asp Pro Val Thr Phe Leu Gln Leu Ala Thr Gly Phe Ser His
      85              90              95
Trp Pro Glu Met Arg Ser Ala Gly Arg Val Gln Ala Ser Gly Ser His
      100             105             110
Val Asp Asp Val Ala Gly Val Phe Pro Val Val Asp Met Ala Gly Val
      115             120             125
Phe Arg Asp Ile Phe Ala Asp Asp
      130             135

```

<210> 689

<211> 499

<212> DNA

<213> Homo sapiens

<400> 689

```

cgcgtcgagg tactcgacgt cgattttcat cacggtaacg gcacccagaa cattttttac
60
ccgcgcaatg acgtgatgtt catatcgctg cacggcgagc cgcccggtgc ctatccctac
120
tattcgggggt tcagcgatga agtcggcgca ggtgttggcg aagggttcaa cctcaactac
180
ccgctgccga aaaacaccgc ctgggatacc taccgcgacg cctgctgca tgctgcagg
240
aaactccagc aattctgcc gcaggatttg gtgatctcac tgggggtcga caccttcaag
300
gacgacccga tcagtcactt cctgctggaa ggcgaggatt tcacgaggat cggcgagctg
360
atagcgagtg tgggttgccc caccctgttt gtgatggaag gcggctatat ggtcgatgaa
420
atcggaatca acgcggtgaa cgtactgcat ggcttcgaga gcaagcgcgc ttgagcatcc
480
gcccgagac gccgtgata
499

```

<210> 690

<211> 157

<212> PRT

<213> Homo sapiens

<400> 690

```

Arg Val Ala Val Leu Asp Val Asp Phe His His Gly Asn Gly Thr Gln
1      5      10      15
Asn Ile Phe Tyr Pro Arg Asn Asp Val Met Phe Ile Ser Leu His Gly
      20      25      30
Glu Pro Ala Val Ser Tyr Pro Tyr Ser Gly Phe Ser Asp Glu Val
      35      40      45
Gly Ala Gly Val Gly Glu Gly Phe Asn Leu Asn Tyr Pro Leu Pro Lys
      50      55      60
Asn Thr Ala Trp Asp Thr Tyr Arg Asp Ala Leu Leu His Ala Cys Arg

```

```

65          70          75          80
Lys Leu Gln Gln Phe Ser Pro Gln Val Leu Val Ile Ser Leu Gly Val
          85          90          95
Asp Thr Phe Lys Asp Asp Pro Ile Ser His Phe Leu Leu Glu Gly Glu
          100          105          110
Asp Phe Ile Gly Ile Gly Glu Leu Ile Ala Ser Val Gly Cys Pro Thr
          115          120          125
Leu Phe Val Met Glu Gly Gly Tyr Met Val Asp Glu Ile Gly Ile Asn
          130          135          140
Ala Val Asn Val Leu His Gly Phe Glu Ser Lys Arg Ala
145          150          155

```

<210> 691
 <211> 336
 <212> DNA
 <213> Homo sapiens

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<400> 691
ntgctgctg aaaacgtgca ggcgggcgca tcagcgactg gcgagcgctt tggctggagt
60
tcgcaaaggc aaggcccctg ggagttggcc tgcgacatcg cgctgccgtg cgccaccag
120
aacgaactgg acgccgacgc cgccgcacgc ctgctgcgca acggetgcct ttgctggct
180
ggaggcgcca atatgccgcc cgcgcttgag gctgtggata tctttatcga ggcgggcatt
240
ctgttcgcgc ccggcaaggc atccaatgcc ggcggcgctg ccgtgagtgg cctggaaatg
300
tcgcagaacg ccatgcgcct gctgtggacc gccggc
336

```

<210> 692
 <211> 112
 <212> PRT
 <213> Homo sapiens

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<400> 692
Xaa Leu Arg Glu Asn Val Gln Arg Gly Ala Ser Ala Thr Gly Glu Arg
1          5          10          15
Phe Gly Trp Ser Ser Gln Arg Gln Gly Pro Trp Glu Leu Ala Cys Asp
          20          25          30
Ile Ala Leu Pro Cys Ala Thr Gln Asn Glu Leu Asp Ala Asp Ala Ala
          35          40          45
Arg Thr Leu Leu Arg Asn Gly Cys Leu Cys Val Ala Gly Gly Ala Asn
          50          55          60
Met Pro Pro Ala Leu Glu Ala Val Asp Ile Phe Ile Glu Ala Gly Ile
65          70          75          80
Leu Phe Ala Pro Gly Lys Ala Ser Asn Ala Gly Gly Val Ala Val Ser
          85          90          95
Gly Leu Glu Met Ser Gln Asn Ala Met Arg Leu Leu Trp Thr Ala Gly
          100          105          110

```

<210> 693
 <211> 580

<212> DNA

<213> Homo sapiens

<400> 693

```

ngggcaaccc ggaagggtccg gcgtcccagc cgcctacctc gctgggaccc tgggtcttgc
60
gtcccccgcgt ggctcctgc ccaagcgact gcggccagga tgggccggaa ggtgaccgtg
120
gccacctgcg cactcaacca gtgggccctg gacttcgagg gcaatttgca aagaatttta
180
aagagtattg aaattgccaa aaacagagga gcaagataca ggcttggacc agagctggaa
240
atatgcggtc gcggatgttg ggatcattat taagagtcgg acaccctctt gcaactcgtt
300
caagtcctag cggcccttgt ggagtctccc gtcactcagg acatcatctg cgacgtgggg
360
atacctgtaa tgcaccgaaa cgctcgctac aactgcagag tgatattcct caacaggaag
420
atcctgctca tcagacccaa gatggccttg gccaatgaag gcaactaccg cgagctgcgc
480
tgggtcaccc cgtgggtcgag gagtcggtga gtcgggtgcc tgaccactcc tgggatgtgc
540
gttaagcacc tccgctgtgt gtagccttgg gtctgatca
580

```

<210> 694

<211> 136

<212> PRT

<213> Homo sapiens

<400> 694

```

Met Gly Arg Lys Val Thr Val Ala Thr Cys Ala Leu Asn Gln Trp Ala
1      5      10      15
Leu Asp Phe Glu Gly Asn Leu Gln Arg Ile Leu Lys Ser Ile Glu Ile
20     25     30
Ala Lys Asn Arg Gly Ala Arg Tyr Arg Leu Gly Pro Glu Leu Glu Ile
35     40     45
Cys Gly Cys Gly Cys Trp Asp His Tyr Tyr Glu Ser Asp Thr Leu Leu
50     55     60
His Ser Phe Gln Val Leu Ala Ala Leu Val Glu Ser Pro Val Thr Gln
65     70     75     80
Asp Ile Ile Cys Asp Val Gly Ile Pro Val Met His Arg Asn Val Arg
85     90     95
Tyr Asn Cys Arg Val Ile Phe Leu Asn Arg Lys Ile Leu Leu Ile Arg
100    105    110
Pro Lys Met Ala Leu Ala Asn Glu Gly Asn Tyr Arg Glu Leu Arg Trp
115    120    125
Phe Thr Pro Trp Ser Arg Ser Arg
130    135

```

<210> 695

<211> 439

<212> DNA

<213> Homo sapiens

<400> 695

ntgggtgactc aggcgtccaa tggcacgatg gctgacgtcg tcaatatgcc gtcctcgacc
60
atcatggctc tgctgagggc tgattacctg ctgatatcg agacttcggt gcccggtatc
120
ggcgacaagt tcgtcccga cgtctggggc aaactcaaac tcggcaagga caacgagcac
180
accgctctgc cctggtactt cggcccgttc gtcgtgacgt acaacaagga cattttcaag
240
gatgttggcc tcgatcccg aatcccgcg aagacgatga ccgagtacct cgacttcgcc
300
aagaaaaatca ccgctgccgg caagcaggcg gtctatggca acacgtcgtg gtacatgctc
360
gcggaatggc gtgccctcgg cgtcaaggtc atgaatgacg acttcaccaa gttcactttt
420
gcctcggaat ccaacgcgt
439

<210> 696

<211> 146

<212> PRT

<213> Homo sapiens

<400> 696

Xaa	Val	Thr	Gln	Ala	Ser	Asn	Gly	Thr	Met	Ala	Asp	Val	Val	Asn	Met
1				5				10						15	
Pro	Ser	Ser	Thr	Ile	Met	Ala	Leu	Ser	Arg	Ala	Asp	Tyr	Leu	Leu	Asp
			20					25					30		
Ile	Glu	Thr	Ser	Val	Pro	Gly	Ile	Gly	Asp	Lys	Phe	Val	Pro	Asp	Val
		35					40					45			
Trp	Gly	Lys	Leu	Lys	Leu	Gly	Lys	Asp	Asn	Glu	His	Thr	Ala	Leu	Pro
	50					55				60					
Trp	Tyr	Phe	Gly	Pro	Phe	Val	Val	Thr	Tyr	Asn	Lys	Asp	Ile	Phe	Lys
65					70				75					80	
Asp	Val	Gly	Leu	Asp	Pro	Glu	Ile	Pro	Pro	Lys	Thr	Met	Thr	Glu	Tyr
				85				90						95	
Leu	Asp	Phe	Ala	Lys	Lys	Ile	Thr	Ala	Ala	Gly	Lys	Gln	Ala	Val	Tyr
			100					105					110		
Gly	Asn	Thr	Ser	Trp	Tyr	Met	Leu	Ala	Glu	Trp	Arg	Ala	Leu	Gly	Val
		115				120						125			
Lys	Val	Met	Asn	Asp	Asp	Phe	Thr	Lys	Phe	Thr	Phe	Ala	Ser	Glu	Ser
	130					135						140			
Asn	Ala														
145															

<210> 697

<211> 368

<212> DNA

<213> Homo sapiens

<400> 697

nggcaataac gccgtcgtcg aaatccgttc ccttgatctc gaacatgccg atgaagcgg
60

tgtcggatgat ggggtcggag atgtcgccct cccacaactt gaacttgatc ggaccaaccc
 120
 ttccaccct ggagagactc gcctgccttg aaagtcttct tgcccttctt gggcaactga
 180
 tcgccctccc gaacgagata atccaagctc aagcgaccgc ccaccttgtc gcgcgcctcc
 240
 acaccgacgg aatgcgatgc cgggatcgca tcgatgctag cggcgggtgcg tgcaatgaca
 300
 atcttgctctt cagcagcga tacgggcccgc ccgttggaaat cgaacacaaa caccttgaag
 360
 gcgttgtn
 368

<210> 698
 <211> 108
 <212> PRT
 <213> Homo sapiens

<400> 698
 Met Pro Met Lys Arg Leu Ser Val Met Gly Ser Glu Met Ser Pro Ser
 1 5 10 15
 His Asn Leu Asn Leu Ile Gly Pro Thr Leu Ser Thr Leu Glu Arg Leu
 20 25 30
 Ala Cys Leu Glu Ser Leu Leu Ala Leu Leu Gly Gln Leu Ile Ala Leu
 35 40 45
 Pro Asn Glu Ile Ile Gln Ala Gln Ala Thr Ala His Leu Val Ala Arg
 50 55 60
 Leu His Thr Asp Gly Met Arg Cys Arg Asp Arg Ile Asp Ala Ser Gly
 65 70 75 80
 Gly Ala Cys Asn Asp Asn Leu Val Phe Thr Gln Arg Tyr Gly Pro Ala
 85 90 95
 Val Gly Ile Glu His Lys His Leu Glu Gly Val Val
 100 105

<210> 699
 <211> 363
 <212> DNA
 <213> Homo sapiens

<400> 699
 nacgcgtaca caaatagtat cggaatcatt tcctatcatg ctgctatgac gagatttctc
 60
 cacacctcag attggcaact ggggatgact cggcactacc tgcgaagcg cggcgacgac
 120
 gaccacagg cacggtttac tgccgatcga atcgagacgg tgcgcaggct gggcgacggt
 180
 gcccggaagg agggctgcga gtttgcgctc gtcgccggag atgtcttcga aaccacaaat
 240
 gtctccactc agatcattgc ccgcgcgtgt gaggcgatag cctccattga tctccccgtg
 300
 tacctgctgc ccggaaatca cgacagctta gagccggggg gtctctggga tgggccagaa
 360
 ttc
 363

<210> 700
 <211> 121
 <212> PRT
 <213> Homo sapiens

<400> 700
 Xaa Ala Tyr Thr Asn Ser Ile Gly Ile Ile Ser Tyr His Ala Ala Met
 1 5 10 15
 Thr Arg Phe Leu His Thr Ser Asp Trp Gln Leu Gly Met Thr Arg His
 20 25 30
 Tyr Leu Ser Lys Arg Gly Asp Asp Asp Pro Gln Ala Arg Phe Thr Ala
 35 40 45
 Asp Arg Ile Glu Thr Val Arg Arg Leu Gly Asp Val Ala Arg Lys Glu
 50 55 60
 Gly Cys Glu Phe Val Val Val Ala Gly Asp Val Phe Glu Thr His Asn
 65 70 75 80
 Val Ser Thr Gln Ile Ile Ala Arg Ala Cys Glu Ala Ile Ala Ser Ile
 85 90 95
 Asp Leu Pro Val Tyr Leu Leu Pro Gly Asn His Asp Ser Leu Glu Pro
 100 105 110
 Gly Cys Leu Trp Asp Gly Pro Glu Phe
 115 120

<210> 701
 <211> 585
 <212> DNA
 <213> Homo sapiens

<400> 701
 nacgcgtccg ggcacaccgt caccgaggcg acgttccacg gccacccac gctgatctat
 60
 ttccgctacg tccattgcgc ggatgtctgc ccgctgacac tgggcaacat ggtctcggcc
 120
 ctcgatcgcc tgggctcccg ggcggaaggc atcggtccga tcttcatctc cgtcgatccg
 180
 gcccgcgaca caccgcgct ggtcggacag tatgtcgcgc atttctcgcc gcggatcgtc
 240
 gggctgaccg gcaccgcagc gcagctggcg ccggtactgg cggagttcca catcaccgcg
 300
 cgcgccgaac ctgcggcaca cgacatggcc gccgacatgt atgccgtcga ccacagcgcc
 360
 ctctctatc tgatggacgg caacaaccgc ctggtgctgg tgatggcggt cagcgccgac
 420
 gctgcctcgc tgacgcacca gctggcgccc ggctggccg gggcaagaat gagaccatga
 480
 aagcgatcgg accgacggac gccccgaac aggcagcgcc gggctggctg ttccggcatca
 540
 tctgtctgct cggcatcgcc ggcattgctg atttctcga ccggt
 585

<210> 702
 <211> 159
 <212> PRT

<213> Homo sapiens

<400> 702

```

Xaa Ala Ser Gly His Thr Val Thr Glu Ala Thr Phe His Gly His Pro
 1           5           10           15
Thr Leu Ile Tyr Phe Gly Tyr Val His Cys Ala Asp Val Cys Pro Leu
 20           25           30
Thr Leu Gly Asn Met Val Ser Ala Leu Asp Arg Leu Gly Ser Arg Ala
 35           40           45
Asp Gly Ile Val Pro Ile Phe Ile Ser Val Asp Pro Ala Arg Asp Thr
 50           55           60
Pro Ala Leu Val Gly Gln Tyr Val Ala His Phe Ser Pro Arg Ile Val
 65           70           75           80
Gly Leu Thr Gly Thr Ala Ala Gln Leu Ala Pro Val Leu Ala Glu Phe
 85           90           95
His Ile Thr Ala Arg Ala Glu Pro Ala Ala His Asp Met Ala Ala Asp
100           105           110
Met Tyr Ala Val Asp His Ser Ala Leu Leu Tyr Leu Met Asp Gly Asn
115           120           125
Asn Arg Leu Leu Arg Val Met Ala Val Ser Ala Asp Ala Ala Ser Leu
130           135           140
Thr His Gln Leu Ala Ala Gly Leu Ala Gly Ala Arg Met Arg Pro
145           150           155

```

<210> 703

<211> 390

<212> DNA

<213> Homo sapiens

<400> 703

```

ttctctgctc catacacacc tcagcagaat ggcacgccc agcgcaagaa cataactctt
60
attgagatgg cccgaacgat gcttgatgag tacaagactc cgcggaagtt ctggcctgaa
120
gccattgata ctgcttgatc caccatcaac cgcgtttatc ttcacaaggt tttggagaaa
180
acctcttatg agttcctaac tggtaagaaa cccaatgtaa gctatttcag agtatttggt
240
gctaggtgct ggatcaagga tcctcatcac acttcaaaat ttgcaccgaa agcacatgaa
300
ggttttatgc ttggttacgg aaaggattcg cactcctaca gactcttcaa cctctttcac
360
tataaagtgg ttcaaactgt ggatgtgcgn
390

```

<210> 704

<211> 130

<212> PRT

<213> Homo sapiens

<400> 704

```

Phe Ser Ala Pro Tyr Thr Pro Gln Gln Asn Gly Ile Ala Glu Arg Lys
 1           5           10           15
Asn Ile Thr Leu Ile Glu Met Ala Arg Thr Met Leu Asp Glu Tyr Lys

```

```

      20      25      30
Thr Pro Arg Lys Phe Trp Pro Glu Ala Ile Asp Thr Ala Cys His Thr
      35      40      45
Ile Asn Arg Val Tyr Leu His Lys Val Leu Glu Lys Thr Ser Tyr Glu
      50      55      60
Phe Leu Thr Gly Lys Lys Pro Asn Val Ser Tyr Phe Arg Val Phe Gly
      65      70      75      80
Ala Arg Cys Trp Ile Lys Asp Pro His His Thr Ser Lys Phe Ala Pro
      85      90      95
Lys Ala His Glu Gly Phe Met Leu Gly Tyr Gly Lys Asp Ser His Ser
      100      105      110
Tyr Arg Val Phe Asn Leu Phe His Tyr Lys Val Val Gln Thr Val Asp
      115      120      125
Val Arg
      130

```

<210> 705
 <211> 513
 <212> DNA
 <213> Homo sapiens

```

<400> 705
acgcgtatatt cgtccaaatg attcaaata aaacgccgcc gttaaaaacg atgcaggcga
60
agacaatgcg aataaaaaag gtggtaaata agcatgagtt ttaaaatgac acaatctcaa
120
tacacaagtc tttatggacc aactgtagga gactccgtga gattaggaga tacgaacttg
180
tttgcacaag ttgagaaaga ctatgcaaata tatggggatg aagctacttt cgggtggcgga
240
aaatcaattc gtgatggtat ggctcaaaat cctaattgtga caagagatga taaaaatgta
300
gccgatttag ttttaactaa cgcattaatt attgattatg acaagattgt taaagcagat
360
atcggtatta aaaatgggta tatttttaag attggtaaag ctggaaaccc agatataatg
420
gataacgttg acatcatcat tgggtgaaca actgatatta ttgctgctga aggtaaaatt
480
gttactgccg gcggtatcga tacacacgtg cac
513

```

<210> 706
 <211> 140
 <212> PRT
 <213> Homo sapiens

```

<400> 706
Met Ser Phe Lys Met Thr Gln Ser Gln Tyr Thr Ser Leu Tyr Gly Pro
1      5      10      15
Thr Val Gly Asp Ser Val Arg Leu Gly Asp Thr Asn Leu Phe Ala Gln
      20      25      30
Val Glu Lys Asp Tyr Ala Asn Tyr Gly Asp Glu Ala Thr Phe Gly Gly
      35      40      45
Gly Lys Ser Ile Arg Asp Gly Met Ala Gln Asn Pro Asn Val Thr Arg

```



```

      50              55              60
Asp Asp Lys Asn Val Ala Asp Leu Val Leu Thr Asn Ala Leu Ile Ile
65              70              75              80
Asp Tyr Asp Lys Ile Val Lys Ala Asp Ile Gly Ile Lys Asn Gly Tyr
      85              90              95
Ile Phe Lys Ile Gly Lys Ala Gly Asn Pro Asp Ile Met Asp Asn Val
      100              105              110
Asp Ile Ile Ile Gly Ala Thr Thr Asp Ile Ile Ala Ala Glu Gly Lys
      115              120              125
Ile Val Thr Ala Gly Gly Ile Asp Thr His Val His
      130              135              140

```

<210> 707

<211> 409

<212> DNA

<213> Homo sapiens

<400> 707

```

acgcgtggca tctcagacc accaaagaca atcctgtcct gggaggcagg gagaaagccg
60
gcacactaca cagtgcacag gtgaagccct caggggggtcc tggagcaggg ccacctccct
120
gggggatccc caggtgccat ttcatggca gtgtctatgg acggctcccc ttggcatggt
180
gctgggtggc aatcctggct gtagctgcc cccctgccc tttttgcttc cctccgaggg
240
cattgtgatc atcagtgtga gtctgttggg aaggagagcc aggtccccag gtttgggaaa
300
ggagttaggt ttccagcct gtctggccat cccccccag ccagcccct cctgctgggt
360
gacgtgtca gttcggtccc tgctgtactg ggaggggggt aggagcata
409

```

<210> 708

<211> 136

<212> PRT

<213> Homo sapiens

<400> 708

```

Met Leu Leu Ala Pro Ser Gln Tyr Ser Arg Gly Arg Thr Glu His Val
1              5              10              15
Thr Gln Gln Glu Gly Leu Gly Trp Gly Val Met Ala Arg Gln Ala Gly
      20              25              30
Lys Pro Tyr Ser Phe Pro Lys Pro Gly Asp Leu Ala Leu Leu Pro Asn
      35              40              45
Arg Leu Thr Leu Met Ile Thr Met Pro Ser Glu Gly Ser Lys Lys Gly
      50              55              60
Arg Gly Trp Gln Leu Gln Pro Gly Leu Pro Pro Ser Thr Met Pro Arg
65              70              75              80
Gly Ala Val His Arg His Cys His Glu Asn Gly Thr Trp Gly Ser Pro
      85              90              95
Arg Glu Val Ala Leu Leu Gln Asp Pro Leu Arg Ala Ser Pro Val His
      100              105              110
Cys Val Val Cys Arg Leu Ser Pro Cys Leu Pro Gly Gln Asp Cys Leu

```

115 120
Trp Trp Ser Glu Asp Ala Thr Arg
130 135

125

<210> 709
<211> 771
<212> DNA
<213> Homo sapiens

<400> 709
acgcgtctga cggagagcct cctgagtctc cccacgcaga ggactcagaa agggaaatcgg
60
tgaccacacc tgggccagcg acgtgtggtg cgccagcctc cccagcggat cacctcctcc
120
tcccctccca ggaggagagt ttctccgaag tccccatgag tgaagcaagc tcagcgaaag
180
acactccact ctttaggatg gagggagagg atgcccttgt gactcagtat cagagcaaag
240
ccagtgacca cgaaggttta ttgtctgacc ccttgagtga ccttcagttg gtctcagatt
300
ttaaatctcc aatcatggcc gatctgaact taagccttcc ttccattcct gaagtgcgat
360
cggatgatga aagaatagat caggttgaag atgacggaga tcaggttgaa gatgatggag
420
agacagcaaa gtcgtcaact ctggacatag gagctttgtc cttgggcttg gtagtcccct
480
gtcctgagag gggaaagggg cccagtggcg aggcagatag gttggtactg ggggagggcc
540
tgtgtgattt caggctgcaa gcaccccagg catctgtgac agctccttca gagcagacca
600
cagagttcgg aattcacaaa ccacatcttg gcaagagctc aagcttggat aaacagctgc
660
caggccccag tgggtggtgag gaagaaaaac cgatgggaaa tgggagtcca agcccgcctc
720
ctggcacatc cctggacaat cctgtaccga gccctcccc ttctgagatc t
771

<210> 710
<211> 205
<212> PRT
<213> Homo sapiens

<400> 710
Met Ser Glu Ala Ser Ser Ala Lys Asp Thr Pro Leu Phe Arg Met Glu
1 5 10 15
Gly Glu Asp Ala Leu Val Thr Gln Tyr Gln Ser Lys Ala Ser Asp His
20 25 30
Glu Gly Leu Leu Ser Asp Pro Leu Ser Asp Leu Gln Leu Val Ser Asp
35 40 45
Phe Lys Ser Pro Ile Met Ala Asp Leu Asn Leu Ser Leu Pro Ser Ile
50 55 60
Pro Glu Val Ala Ser Asp Asp Glu Arg Ile Asp Gln Val Glu Asp Asp
65 70 75 80
Gly Asp Gln Val Glu Asp Asp Gly Glu Thr Ala Lys Ser Ser Thr Leu

```

      85              90              95
Asp Ile Gly Ala Leu Ser Leu Gly Leu Val Val Pro Cys Pro Glu Arg
      100              105              110
Gly Lys Gly Pro Ser Gly Glu Ala Asp Arg Leu Val Leu Gly Glu Gly
      115              120              125
Leu Cys Asp Phe Arg Leu Gln Ala Pro Gln Ala Ser Val Thr Ala Pro
      130              135              140
Ser Glu Gln Thr Thr Glu Phe Gly Ile His Lys Pro His Leu Gly Lys
      145              150              155              160
Ser Ser Ser Leu Asp Lys Gln Leu Pro Gly Pro Ser Gly Gly Glu Glu
      165              170              175
Glu Lys Pro Met Gly Asn Gly Ser Pro Ser Pro Pro Gly Thr Ser
      180              185              190
Leu Asp Asn Pro Val Pro Ser Pro Ser Pro Ser Glu Ile
      195              200              205

```

<210> 711
 <211> 432
 <212> DNA
 <213> Homo sapiens

```

<400> 711
nnggatccga cggcgcaaag ccttaatgaa gggtaggcag ttacctcttt ttctgtagga
60
attctcctgt tttatatcta ctcccccta ggttcactct actccctcat cttctgagct
120
aatgtgcccc ctttatttgc acttgcattg aatatgatta tgaacacagt ttttatcatt
180
gatgaccacc ccgttatcag gttggcgatt cgtatgttgt tggaacacga gggttataag
240
gtcgttggtg aaacggacaa cggttgtgac gcgatccaaa tggttcgca atgcctgccg
300
gacctgatca tcctggatat cagcatcccg aaactcgacg gcctcgaagt gctctgccga
360
ttcaacgcca tgaacacatc catgaaaacc ctgattctta ccgccagag tccgacgttg
420
ttcgccacgc gt
432

```

<210> 712
 <211> 93
 <212> PRT
 <213> Homo sapiens

```

<400> 712
Met Ile Met Asn Thr Val Phe Ile Ile Asp Asp His Pro Val Ile Arg
1      5      10      15
Leu Ala Ile Arg Met Leu Leu Glu His Glu Gly Tyr Lys Val Val Gly
20     25     30
Glu Thr Asp Asn Gly Cys Asp Ala Ile Gln Met Val Arg Glu Cys Leu
35     40     45
Pro Asp Leu Ile Ile Leu Asp Ile Ser Ile Pro Lys Leu Asp Gly Leu
50     55     60
Glu Val Leu Cys Arg Phe Asn Ala Met Asn Thr Ser Met Lys Thr Leu

```

```
<210> 714
<211> 155
<212> PRT
<213> Homo sapiens
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804

<210> 715
 <211> 354
 <212> DNA
 <213> Homo sapiens

<400> 715
 nnaccggtgg atgccaacga atatcgtggc gagctgaaag tcggcgccat caccaccgcc
 60
 cagaccggcc tgctgcctca ggcactgggt cgtttgcgcc aggcagcgcc gacgggtggag
 120
 tgcaagttgg taccgggggt ttccctggag ttgctcagcc aggtggacgc aggcgagctg
 180
 gactcggcga tcatcattcg cccgcccttt gatttgccca aggagttgca cgtacaggta
 240
 ctgcgcaagg agccgtttgt gttgatcgtg cccagggcgg tcgggggtga tgacccttg
 300
 caactgctcg aagctcatcc ccacgtgcgc tacgaccgcg cttcgtttg cggg
 354

<210> 716
 <211> 118
 <212> PRT
 <213> Homo sapiens

<400> 716
 Xaa Pro Val Asp Ala Asn Glu Tyr Arg Gly Glu Leu Lys Val Gly Ala
 1 5 10 15
 Ile Thr Thr Ala Gln Thr Gly Leu Leu Pro Gln Ala Leu Val Arg Leu
 20 25 30
 Arg Gln Ala Ala Pro Thr Val Glu Cys Lys Leu Val Pro Gly Val Ser
 35 40 45
 Leu Glu Leu Leu Ser Gln Val Asp Ala Gly Glu Leu Asp Ser Ala Ile
 50 55 60
 Ile Ile Arg Pro Pro Phe Asp Leu Pro Lys Glu Leu His Val Gln Val
 65 70 75 80
 Leu Arg Lys Glu Pro Phe Val Leu Ile Val Pro Gln Ala Val Gly Gly
 85 90 95
 Asp Asp Pro Leu Gln Leu Leu Glu Ala His Pro His Val Arg Tyr Asp
 100 105 110
 Arg Ala Ser Phe Gly Gly
 115

<210> 717
 <211> 401
 <212> DNA
 <213> Homo sapiens

<400> 717
 acgcgtatct ttctcgtaaa cctactaatt ttccattcaa cgctcgacgc ccaggttaaag
 60
 ccgttaagtc atctaaatag gccattctgt ggctctccat cagtaagaac caaatccata
 120
 ggagaagttg agcggatagt aatgcatcaa attgatgctg agaaaccgaa aaatgggaca
 180

atataatcaa gctgacaata ctgatcaaac cactcgcacg aaagctacta ccgcttgacc
 240
 accaagcaga aaaaaccaat gaaatgctta aaaataaaat cgtccaaagt aaaaagctag
 300
 accaggtggt agccagatta aaaataggcc gctctagaaa atgaaaagaa atccaatgag
 360
 attcaacggc gtagcaccag cacagcaaca tagccactag t
 401

<210> 718
 <211> 130
 <212> PRT
 <213> Homo sapiens

<400> 718
 Met Leu Leu Cys Trp Cys Tyr Ala Val Glu Ser His Trp Ile Ser Phe
 1 5 10 15
 His Phe Leu Glu Arg Pro Ile Phe Asn Leu Ala Thr Thr Trp Ser Ser
 20 25 30
 Phe Leu Leu Trp Thr Ile Leu Phe Leu Ser Ile Ser Leu Val Phe Ser
 35 40 45
 Ala Trp Trp Ser Ser Gly Ser Ser Phe His Ala Ser Gly Leu Ile Ser
 50 55 60
 Ile Val Ser Leu Ile Ile Leu Ser His Phe Ser Val Ser Gln His Gln
 65 70 75 80
 Phe Asp Ala Leu Leu Ser Ala Gln Leu Leu Trp Ile Trp Phe Leu
 85 90 95
 Leu Met Glu Ser His Arg Met Ala Tyr Leu Asp Asp Leu Thr Ala Leu
 100 105 110
 Pro Gly Arg Arg Ala Leu Asn Glu Lys Leu Val Gly Leu Pro Lys Arg
 115 120 125
 Tyr Ala
 130

<210> 719
 <211> 685
 <212> DNA
 <213> Homo sapiens

<400> 719
 tatatagggc tatctacctt attcacagca cattccatct acacaacctt gtagcggtca
 60
 ctcttgaagg cggattttca taggcgctgc gcctctcata ttcaagcatc aaggcaatcc
 120
 aatctccctg cggttggtaac tgggcaaaag aaagacctct gcagtcacgc aacctcatcg
 180
 tgcaaagtcc gtggcggtgt caactctgac ggcttggaag ctgcagacct tgtcaaagga
 240
 cctcgccgca aattcaccct tgatctcttt gtcttggtcca actcttggtcc ctgagaatga
 300
 aactgtcttc tgagagtcca tcaatgcgac gctgactcgt gagaagtgtc gaatcacgtc
 360
 gccatttttg agacctgcca acgcagctct ggaacctgcc aggacgcctt ccacaacacc
 420

agaacgcagc gactttgcgt taaatccaag ctcaaacc tcttgctcca caggcctgag
 480
 cataaaaaagg tattctgcga cgggaaatgt aaagtctgag cttagggtgca gaggaccgcc
 540
 atcgatcagt gtctgatact gcttgctccgc gacttctttg ccgagcaatg ggtatagcgt
 600
 tttcaaccaa gtggaagcag tcgtttgctc accctggcga ttccggcgag ttagggacat
 660
 gaccacgtca tcgatgggat ttgac
 685

<210> 720
 <211> 161
 <212> PRT
 <213> Homo sapiens

<400> 720
 Met Ser Leu Thr Arg Asn Arg Gln Gly Glu Gln Thr Thr Ala Ser
 1 5 10 15
 Thr Trp Leu Lys Thr Leu Tyr Pro Leu Leu Gly Lys Glu Val Ala Asp
 20 25 30
 Lys Gln Tyr Gln Thr Leu Ile Asp Gly Gly Thr Leu His Leu Ser Ser
 35 40 45
 Asp Phe Thr Phe Pro Val Ala Glu Tyr Leu Phe Met Leu Arg Pro Val
 50 55 60
 Glu Gln Glu Val Phe Glu Leu Gly Phe Asn Ala Lys Ser Leu Arg Ser
 65 70 75 80
 Gly Val Val Glu Gly Val Leu Ala Gly Ser Arg Ala Ala Leu Ala Gly
 85 90 95
 Leu Gln Asn Gly Asp Val Ile Gln His Phe Ser Arg Val Ser Val Ala
 100 105 110
 Leu Met Asp Ser Gln Lys Thr Val Ser Phe Ser Gly Thr Arg Val Gly
 115 120 125
 Gln Asp Lys Glu Ile Lys Gly Glu Phe Arg Pro Arg Ser Phe Asp Lys
 130 135 140
 Val Cys Ser Phe Gln Ala Val Arg Val Asp His Ala Thr Ala Phe Ala
 145 150 155 160
 Arg

<210> 721
 <211> 579
 <212> DNA
 <213> Homo sapiens

<400> 721
 aagcttgagg tcaggggtgtg gcagtgtggc gggagtgtgg aggtcctgcc ctgctcacgg
 60
 attgccacaca ttgagcgagc ccacaagccc tacacagagg acctcaccgc ccatgtccgc
 120
 aggaacgctc tcaggggtggc tgaagtctgg atggatgaat ttaaaagcca cgtctactgg
 180
 catggaacat accaggagga ctcaggaatt gacattgggg acatcactgc aaggaaggct
 240

ctcaggaaac agctgcagtg caagaccttc cgggtggtacc tggtcagcgt gtacccagag
 300
 atgaggatgt actccgacat cattgcctat ggagtgcctgc agaattctct gaagactgat
 360
 ttgtgtcttg accaggggcc agatacagag aatgtcccca tcatgtacat ctgccatggg
 420
 atgacgcctc agaacgtgta ctacacgagc agtcagcaga tccatgtggg cattctgagc
 480
 cccaccgtgg atgatgatga caaccgatgc ctggtggacg tcaacagccg gccccggctc
 540
 atcgaatgca gctacgcaa agccaagagg atgaagctt
 579

<210> 722

<211> 193

<212> PRT

<213> Homo sapiens

<400> 722

Lys	Leu	Gly	Ile	Arg	Val	Trp	Gln	Cys	Gly	Gly	Ser	Val	Glu	Val	Leu
1			5						10				15		
Pro	Cys	Ser	Arg	Ile	Ala	His	Ile	Glu	Arg	Ala	His	Lys	Pro	Tyr	Thr
			20					25				30			
Glu	Asp	Leu	Thr	Ala	His	Val	Arg	Arg	Asn	Ala	Leu	Arg	Val	Ala	Glu
		35					40					45			
Val	Trp	Met	Asp	Glu	Phe	Lys	Ser	His	Val	Tyr	Trp	His	Gly	Thr	Tyr
	50					55				60					
Gln	Glu	Asp	Ser	Gly	Ile	Asp	Ile	Gly	Asp	Ile	Thr	Ala	Arg	Lys	Ala
65				70				75					80		
Leu	Arg	Lys	Gln	Leu	Gln	Cys	Lys	Thr	Phe	Arg	Trp	Tyr	Leu	Val	Ser
			85					90					95		
Val	Tyr	Pro	Glu	Met	Arg	Met	Tyr	Ser	Asp	Ile	Ile	Ala	Tyr	Gly	Val
			100					105					110		
Leu	Gln	Asn	Ser	Leu	Lys	Thr	Asp	Leu	Cys	Leu	Asp	Gln	Gly	Pro	Asp
		115				120						125			
Thr	Glu	Asn	Val	Pro	Ile	Met	Tyr	Ile	Cys	His	Gly	Met	Thr	Pro	Gln
		130				135					140				
Asn	Val	Tyr	Tyr	Thr	Ser	Ser	Gln	Gln	Ile	His	Val	Gly	Ile	Leu	Ser
145				150					155					160	
Pro	Thr	Val	Asp	Asp	Asp	Asn	Arg	Cys	Leu	Val	Asp	Val	Asn	Ser	
			165					170					175		
Arg	Pro	Arg	Leu	Ile	Glu	Cys	Ser	Tyr	Ala	Lys	Ala	Lys	Arg	Met	Lys
			180					185					190		

Leu

<210> 723

<211> 384

<212> DNA

<213> Homo sapiens

<400> 723

acgcgtcctc ttacgctcag ttttgacaat gcgtgctggc agccaaccga agccgtaaaa
 60

ctcaacgaaa tgctctcgct taaaccgtgc gaaggaaccc caccgcaatg gcgcttattc
 120
 cgcgaaagggg attaccaaat gcgcattgat acgcgctccg gaacgcctac gctgatgctt
 180
 accgtacaaa gtgtaaccga caaacctgtt acggacgtca ctcgacaatg tcctaaatgg
 240
 gacggcaagc ccctcacctt tgacgtaacg aatacattcc cggaaggctc cgctgtacga
 300
 gacttctaca gcaagcaaac cgctatgggtg cagcaaggta aaatcacact tcagcctgcc
 360
 gctaacagca atggcctgct gctg
 384

<210> 724

<211> 128

<212> PRT

<213> Homo sapiens

<400> 724

Thr	Arg	Pro	Leu	Thr	Leu	Ser	Phe	Asp	Asn	Ala	Cys	Trp	Gln	Pro	Thr
1				5					10					15	
Glu	Ala	Val	Lys	Leu	Asn	Glu	Met	Leu	Ser	Leu	Lys	Pro	Cys	Glu	Gly
			20					25					30		
Thr	Pro	Pro	Gln	Trp	Arg	Leu	Phe	Arg	Glu	Gly	Asp	Tyr	Gln	Met	Arg
			35				40					45			
Ile	Asp	Thr	Arg	Ser	Gly	Thr	Pro	Thr	Leu	Met	Leu	Thr	Val	Gln	Ser
	50					55					60				
Val	Thr	Asp	Lys	Pro	Val	Thr	Asp	Val	Thr	Arg	Gln	Cys	Pro	Lys	Trp
	65				70				75					80	
Asp	Gly	Lys	Pro	Leu	Thr	Leu	Asp	Val	Thr	Asn	Thr	Phe	Pro	Glu	Gly
			85					90					95		
Ser	Val	Val	Arg	Asp	Phe	Tyr	Ser	Lys	Gln	Thr	Ala	Met	Val	Gln	Gln
			100					105					110		
Gly	Lys	Ile	Thr	Leu	Gln	Pro	Ala	Ala	Asn	Ser	Asn	Gly	Leu	Leu	Leu
			115				120						125		

<210> 725

<211> 521

<212> DNA

<213> Homo sapiens

<400> 725

tcattgacttg ctttattgca gtggtctgga actggtggat ggaacgaatt ttattctagag
 60
 cctgggtgaac agcttcccag gtgtgcattt agggcctcct agggatcatc aaagttttta
 120
 gaaaataggt ttccttcttc cacaggcatg gagaaggaag gaaattttgc actggccttt
 180
 gggaagctga agaagagctg gggggaggct tgttctgaca aaatagtgac tcttccctg
 240
 cttgaaatgt cccacagaag gctgtttctg gttcacattt gcccctctag gtccactccc
 300
 tccccttcat cctgctcact gccagagaga ctatgctggg agtggtgcat cgggtggtctc
 360

caggcccttt taggctcaag gtgttcattc cctggctcct tccctgccat gtctttgttc
 420
 cttctccct ctttccatc ccagcagcca cctctcctc tccaccagac ctgggaacca
 480
 tcattcccaac cacaatcacc ccgtggttct attacacgcg t
 521

<210> 726

<211> 124

<212> PRT

<213> Homo sapiens

<400> 726

Met	Glu	Lys	Glu	Gly	Asn	Phe	Ala	Leu	Ala	Phe	Gly	Lys	Leu	Lys	Lys
1				5				10					15		
Ser	Trp	Gly	Glu	Ala	Cys	Ser	Asp	Lys	Ile	Val	Thr	Leu	Ser	Leu	Leu
		20						25				30			
Glu	Met	Ser	His	Arg	Arg	Leu	Phe	Leu	Val	His	Ile	Cys	Pro	Ser	Arg
	35					40				45					
Ser	Thr	Pro	Ser	Pro	Ser	Ser	Cys	Ser	Leu	Pro	Glu	Arg	Leu	Cys	Trp
	50				55				60						
Glu	Trp	Cys	Ile	Gly	Gly	Leu	Gln	Ala	Leu	Leu	Gly	Ser	Arg	Cys	Ser
65				70				75					80		
Phe	Pro	Gly	Ser	Phe	Pro	Ala	Met	Ser	Leu	Phe	Leu	Pro	Pro	Ser	Phe
		85						90					95		
Pro	Ser	Gln	Gln	Pro	Pro	Ser	Ser	Phe	His	Gln	Thr	Trp	Glu	Pro	Ser
		100						105					110		
Ser	Gln	Pro	Gln	Ser	Pro	Arg	Gly	Ser	Ile	Thr	Arg				
	115						120								

<210> 727

<211> 629

<212> DNA

<213> Homo sapiens

<400> 727

naccggtgtt cgtcccaact ccggtgtcta cgcccgacgc aaccagattg gtgctccggc
 60
 tctgttgctt gacggcacgc tggctcagga ctgatctcg ggaaccttgg cgactcgcgc
 120
 tgccattatc gacgctggtg agttgaaggc tccgacgcac cgggcgtttg cgtcaatcag
 180
 tgccgccccg cagcaggtcc aaggagaact cgaatgaatc cgaatgacta cctggtgctc
 240
 tcggcgatct tgttcgctat cggcatcgtg ggcttcctga cgaggcgtaa tgccctggtg
 300
 gcctttatgt cgggtggagt gatgctcaac gccgcgaacc tggcgctggt gactttcgct
 360
 cacgtacacg gctctctcga cggacaggtc ggggttttct tcgtgatgat cgtggcagcc
 420
 gctgaggtgg ttgtcggttt ggcatcatc gtcactatct tccgttcccg tcgcaccact
 480
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3300
gaaagccata tttgggtata tttgaagtgg aaagtgtgta tgaataacag caagggaaga
3360
gcattcttac ataggaggta tgcattctcc cctgagcctt gagaacctgt ctcaacacgg
3420
gggcggggag ggggcagctg ttggttcttt ctaacctct ccaggtcagg gaacaaattt
3480
gcccctaaac ttccacagga ggcactctac cctctgggcc agagctgggc acagtggcaa
3540
agtcagatta gaatttctag agttctaaca gcgattccca accatttcct caacttttct
3600
tctgtttccc acatcccaag gcagggaat cctgctgcc tctcctcatc ttctaactca
3660
gctgtaaggc ggtttaggag ccgctggcag aatcaatggc atcgaccaag ggaggggggg
3720
tggcaaggga ttttctgtg cttaactact gatcacggct aagtggaaat cctataaaca
3780
cgagcgga tcaatggagg ctgcttagcg gccaggggag aggggcggcc cacagattgc
3840
atctgacgga tgagcgagag gaagcagcca gggagggctc aaggaagagt agcttagagg
3900
agggggaaga aacaggcagc gctggagaga gaggagtcac tgtcagaagg gacactgagg
3960
ggagaggcac agtgggcca ggagtggact ccgtagacc cagagttccc tccccctct
4020

aggaagtgtac acccctagcc caggcagtggt tcaggatctt cagtctcctg tggcctctct
 4080
 ctggagctgt tcacttctag caggcgctga tagtcttgag gccggaaacg ctgtagatac
 4140
 acaatcagct tggctggtgc tgtctcctgt gcaggcacac ctcaaagccc gagagtctcc
 4200
 tcgcgggacc cacagagggg gaagggagcc caccccatac actcgcgagg aatgccggga
 4260
 gcagttccgg atcccggacc tcggcccgac cctccgcgcg cccggcaggt cccggcacca
 4320
 gcggccatat tacgcccgtt gtggcggtgc cgagagcagg ccaggc
 4366

<210> 734

<211> 364

<212> PRT

<213> Homo sapiens

<400> 734

Met	Val	Val	Pro	Ser	Leu	Lys	Leu	Gln	Asp	Leu	Ile	Glu	Glu	Ile	Arg
1				5					10					15	
Gly	Ala	Lys	Thr	Gln	Ala	Gln	Glu	Arg	Glu	Val	Ile	Gln	Lys	Glu	Cys
			20					25					30		
Ala	His	Ile	Arg	Ala	Ser	Phe	Arg	Asp	Gly	Asp	Pro	Val	His	Arg	His
		35					40					45			
Arg	Gln	Leu	Ala	Lys	Leu	Leu	Tyr	Val	His	Met	Leu	Gly	Tyr	Pro	Ala
		50				55					60				
His	Phe	Gly	Gln	Met	Glu	Cys	Leu	Lys	Leu	Ile	Ala	Ser	Ser	Arg	Phe
65				70						75				80	
Thr	Asp	Lys	Arg	Val	Gly	Tyr	Leu	Gly	Ala	Met	Leu	Leu	Leu	Asp	Glu
			85					90						95	
Arg	His	Asp	Ala	His	Leu	Leu	Ile	Thr	Asn	Ser	Ile	Lys	Asn	Asp	Leu
			100					105					110		
Ser	Gln	Gly	Ile	Gln	Pro	Val	Gln	Gly	Leu	Ala	Leu	Cys	Thr	Leu	Ser
		115					120					125			
Thr	Met	Gly	Ser	Ala	Glu	Met	Cys	Arg	Asp	Leu	Ala	Pro	Glu	Val	Glu
		130				135				140					
Lys	Leu	Leu	Leu	Gln	Pro	Ser	Pro	Tyr	Val	Arg	Lys	Lys	Ala	Ile	Leu
145				150						155				160	
Thr	Ala	Val	His	Met	Ile	Arg	Lys	Val	Pro	Glu	Leu	Ser	Ser	Val	Phe
			165					170						175	
Leu	Pro	Pro	Cys	Ala	Gln	Leu	Leu	His	Glu	Arg	His	His	Gly	Ile	Leu
			180					185					190		
Leu	Gly	Thr	Ile	Thr	Leu	Ile	Thr	Glu	Leu	Cys	Glu	Arg	Ser	Pro	Ala
		195					200					205			
Ala	Leu	Arg	His	Phe	Arg	Lys	Val	Val	Pro	Gln	Leu	Val	His	Ile	Leu
		210				215					220				
Arg	Thr	Leu	Val	Thr	Met	Gly	Tyr	Ser	Thr	Glu	His	Ser	Ile	Ser	Gly
225				230						235				240	
Val	Ser	Asp	Pro	Phe	Leu	Gln	Val	Gln	Ile	Leu	Arg	Leu	Leu	Arg	Ile
			245					250						255	
Leu	Gly	Arg	Asn	His	Glu	Glu	Ser	Ser	Glu	Thr	Met	Asn	Asp	Leu	Leu
			260					265					270		
Ala	Gln	Val	Ala	Thr	Asn	Thr	Asp	Thr	Ser	Arg	Asn	Ala	Gly	Asn	Ala

275	280	285
Val Leu Phe Glu Thr	Val Leu Thr Ile Met Asp	Ile Arg Ser Ala Ala
290	295	300
Gly Leu Arg Val Leu Ala	Val Asn Ile Leu Gly Arg	Phe Leu Leu Asn
305	310	315
Ser Asp Arg Asn Ile Arg Tyr	Val Ala Leu Thr Ser	Leu Leu Arg Leu
325	330	335
Val Gln Ser Asp His Ser Ala	Val Gln Arg His Arg	Pro Thr Val Val
340	345	350
Glu Cys Leu Arg Glu Thr Asp	Ala Ser Leu Ser Arg	
355	360	

<210> 735

<211> 597

<212> DNA

<213> Homo sapiens

<400> 735

```

gtcgactagc caaaccgccc gggaaagtct tgtaccacgc atcctgggtt atgcggatct
60
catcgccacc atggactcgc gcaatctgga aaccgccaac cttattccag aaaaaataat
120
tgcttgggtgt cctcgatccc gctctgaccg cccactggac cgctcaaccc aggacatcct
180
cagtgccatc cacgacgtgg ctgcaccgct ggcaactacc atcttcgtgg tgggtgccac
240
agcgcgcgac attctgctga cacacgtggt cggtatcgag accggacgtg ccacgctcga
300
cgtggatttc gccgttgccg tagaacattg gccgcagttc gaaaacatca agcagcacct
360
gtagccaac gaccatttcg actctgccgc cagcatcacc catcgactgc tctatcgcac
420
gagcgacaac acgatcgccc ggccaatcga tctcatccca ttcggcggca tcgaacagcc
480
gccagccacc atcaaatggc cgcccacat ggctgtcatg atgaatgttg ctggctacgc
540
agatgcctgg cgggccgcag tcgaagtaga gtttgtgccc gggcgcagca tacgcgt
597

```

<210> 736

<211> 175

<212> PRT

<213> Homo sapiens

<400> 736

Met Asp Ser Arg Asn Leu Glu Thr Ala Asn Leu Ile Pro Glu Lys Ile
1 5 10 15
Ile Ala Trp Cys Pro Arg Ser Arg Ser Asp Arg Pro Leu Asp Arg Ser
20 25 30
Thr Gln Asp Ile Leu Ser Ala Ile His Asp Val Ala Ala Pro Leu Ala
35 40 45
Leu Pro Ile Phe Val Val Gly Ala Thr Ala Arg Asp Ile Leu Leu Thr
50 55 60
His Val Phe Gly Ile Glu Thr Gly Arg Ala Thr Leu Asp Val Asp Phe

```

65          70          75          80
Ala Val Ala Val Glu His Trp Pro Gln Phe Glu Asn Ile Lys Gln His
          85          90          95
Leu Leu Ala Asn Asp His Phe Asp Ser Ala Ala Ser Ile Thr His Arg
          100          105          110
Leu Leu Tyr Arg Thr Ser Asp Asn Thr Ile Ala Arg Pro Ile Asp Leu
          115          120          125
Ile Pro Phe Gly Gly Ile Glu Gln Pro Pro Ala Thr Ile Lys Trp Pro
          130          135          140
Pro Asp Met Ala Val Met Met Asn Val Ala Gly Tyr Ala Asp Ala Trp
145          150          155          160
Arg Ala Ala Val Glu Val Glu Phe Val Pro Gly Arg Ser Ile Arg
          165          170          175

```

<210> 737
 <211> 497
 <212> DNA
 <213> Homo sapiens

```

<400> 737
ntgcgcctgg ccaattccgg cgccatcctc gggcacgata tggggaaaac ctccatggtg
60
cgcgccggca tcgttgggta cggatacgat cccaaccctc acgccgaccg tgccgaccta
120
caccctgccc tgtcctggat cagccacgtc accttcgtta aaactgtcag tgtgggggat
180
accatcggct acggcagaac atggacagcc agcgaaacga caaaaatcgc caccgtccca
240
gtcggttacg ccgacggact gtcccagga ctgtcaaata aaggacacgt tctcattaga
300
gggtccgttc atcccatcgt cggtcggata tgcattggacc aattcatggt cgatcttggc
360
cccgattcga acgtcacggt gggagatgag gtggtgctca ttggaaccca ggaggacgaa
420
actctgaccg ctgatgacat ggccgaactc ctcggaacca ttagctacga gatcacttgc
480
gccatttcca aacgcgt
497

```

<210> 738
 <211> 165
 <212> PRT
 <213> Homo sapiens

```

<400> 738
Xaa Arg Leu Ala Asn Ser Gly Ala Ile Leu Gly His Asp Leu Gly Lys
1          5          10          15
Thr Ser Met Val Arg Ala Gly Ile Val Gly Tyr Gly Tyr Asp Pro Asn
          20          25          30
Pro His Ala Asp Arg Ala Asp Leu His Pro Ala Leu Ser Trp Ile Ser
          35          40          45
His Val Thr Phe Val Lys Thr Val Ser Val Gly Asp Thr Ile Gly Tyr
50          55          60
Gly Arg Thr Trp Thr Ala Ser Glu Thr Thr Lys Ile Ala Thr Val Pro

```

```

65          70          75          80
Val Gly Tyr Ala Asp Gly Leu Ser Arg Gly Leu Ser Asn Lys Gly His
          85          90          95
Val Leu Ile Arg Gly Ser Val His Pro Ile Val Gly Arg Ile Cys Met
          100          105          110
Asp Gln Phe Met Val Asp Leu Gly Pro Asp Ser Asn Val Thr Val Gly
          115          120          125
Asp Glu Val Val Leu Ile Gly Thr Gln Glu Asp Glu Thr Leu Thr Ala
          130          135          140
Asp Asp Met Ala Glu Leu Leu Gly Thr Ile Ser Tyr Glu Ile Thr Cys
145          150          155          160
Ala Ile Ser Lys Arg
          165

```

<210> 739
 <211> 438
 <212> DNA
 <213> Homo sapiens

```

<400> 739
cggctgcggg aagagcgggc gcacgcgctc aagaccaagg aaaagctggc acagaccgcc
60
acggcctcat cagcagctgt gggctcaggc cccctcccg aggcggagca ggcgtggccg
120
cagagcagcg gggaggagga gctgcagctc cagctggccc tggccatgag caaggaggag
180
gccgaccagc ccccgctctg cggccccgag gacgacgccc agctccagct ggcccttagt
240
ttgagccgag aagagcatga taaggaggag cggatccgtc gcggggatga cctgcggctg
300
cagatggcaa tcgaggagag caagaggag actgggggca aggaggagtc gtcctcatg
360
gaccttgctg acgtcttcac gccccagct cctgccccga ccacagaccc ctgggggggc
420
ccagcaccca tggctgct
438

```

<210> 740
 <211> 146
 <212> PRT
 <213> Homo sapiens

```

<400> 740
Arg Leu Arg Glu Glu Arg Ala His Ala Leu Lys Thr Lys Glu Lys Leu
1          5          10          15
Ala Gln Thr Ala Thr Ala Ser Ser Ala Ala Val Gly Ser Gly Pro Pro
          20          25          30
Pro Glu Ala Glu Gln Ala Trp Pro Gln Ser Ser Gly Glu Glu Glu Leu
          35          40          45
Gln Leu Gln Leu Ala Leu Ala Met Ser Lys Glu Glu Ala Asp Gln Pro
          50          55          60
Pro Ser Cys Gly Pro Glu Asp Asp Ala Gln Leu Gln Leu Ala Leu Ser
65          70          75          80
Leu Ser Arg Glu Glu His Asp Lys Glu Glu Arg Ile Arg Arg Gly Asp

```

```

      85              90              95
Asp Leu Arg Leu Gln Met Ala Ile Glu Glu Ser Lys Arg Glu Thr Gly
      100              105              110
Gly Lys Glu Glu Ser Ser Leu Met Asp Leu Ala Asp Val Phe Thr Pro
      115              120              125
Pro Ala Pro Ala Pro Thr Thr Asp Pro Trp Gly Gly Pro Ala Pro Met
      130              135              140
Ala Ala
145

```

```

<210> 741
<211> 726
<212> DNA
<213> Homo sapiens

```

```

<400> 741
gcctctctcc gaccgcgttg ttgtaaggat gtcgcgacgg tgcgcaaaaa tgaatatgtg
60
aatttgccgg tcatctgcct cgtcggggccc actgctagcg gaaaatcagg gctagcggcg
120
cgagtgtgcc gccgcttgta tgtcgatgag caccgccg aaattattaa tactgactcg
180
atggtggtgt atcgcgggat ggacattggc actgccaccc ctacactgcg cgagcagcgc
240
acggtagtgc atcacctggt gtcgattctt gatgtgactg tgccctcctc gctagtactg
300
atgcagacgc tggcccgtga tgccgtcgag gattgtctgt cgcggtggtg catccctgtc
360
ttggtgggag ggtctgcgct gtacaccaag gccatcattg acgaaatgtc catcccgcca
420
actgatccgg aagtgagggc tcggtggcag gagaagctag atgccgaggg gccgcgagtt
480
ctgcatgacg agcttgcccg tcgcgatccc aaggcggctg agtcaatctt gcccggaac
540
ggcaggcgaa tcgtttcgtg cctcgaagt ttattgaccc tgacagggtc ctttactgcc
600
accgatcccc gacgggaccc tccactggcc aagacggtgc aaatgggctt agaactgtcg
660
cgcaaagaca tagaccagcg tattgccgat cgggttgacc agatgtgggc atacggtttc
720
gtcgac
726

```

```

<210> 742
<211> 242
<212> PRT
<213> Homo sapiens

```

```

<400> 742
Ala Ser Leu Arg Pro Arg Cys Cys Lys Asp Val Ala Thr Val Arg Lys
1 5 10 15
Asn Glu Tyr Val Asn Leu Pro Val Ile Cys Leu Val Gly Pro Thr Ala
20 25 30
Ser Gly Lys Ser Gly Leu Ala Val Arg Val Cys Arg Arg Leu Tyr Val

```



```

      35              40              45
Asp Glu His Pro Ala Glu Ile Ile Asn Thr Asp Ser Met Val Val Tyr
  50              55              60
Arg Gly Met Asp Ile Gly Thr Ala Thr Pro Thr Leu Arg Glu Gln Arg
  65              70              75              80
Thr Val Val His His Leu Val Ser Ile Leu Asp Val Thr Val Pro Ser
      85              90              95
Ser Leu Val Leu Met Gln Thr Leu Ala Arg Asp Ala Val Glu Asp Cys
      100              105              110
Leu Ser Arg Gly Val Ile Pro Val Leu Val Gly Gly Ser Ala Leu Tyr
      115              120              125
Thr Lys Ala Ile Ile Asp Glu Met Ser Ile Pro Pro Thr Asp Pro Glu
      130              135              140
Val Arg Ala Arg Trp Gln Glu Lys Leu Asp Ala Glu Gly Pro Arg Val
      145              150              155              160
Leu His Asp Glu Leu Ala Arg Arg Asp Pro Lys Ala Ala Glu Ser Ile
      165              170              175
Leu Pro Gly Asn Gly Arg Arg Ile Val Ser Cys Pro Arg Ser Leu Leu
      180              185              190
Thr Leu Thr Gly Ser Phe Thr Ala Thr Asp Pro Arg Arg Asp Pro Pro
      195              200              205
Leu Ala Lys Thr Val Gln Met Gly Leu Glu Leu Ser Arg Lys Asp Ile
      210              215              220
Asp Gln Arg Ile Ala Asp Arg Val Asp Gln Met Trp Ala Tyr Gly Phe
      225              230              235              240
Val Asp

```

<210> 743

<211> 430

<212> DNA

<213> Homo sapiens

<400> 743

```

naaaaaagtg atggttttcgg atctgtggcc agtcgtcttg caagaaatca ttatgacgtg
60
gatgaggggca acagcancat tcatgttaat caagacattg cgcgcagaac agggacggga
120
aagctatttg taccagtggtg cccggcgac gtgtactcag aggagcccga tggcactatt
180
tccgtggagt acgcagcgtg tctggagtgt ggcacttgtc tggcgggtgc tgcgccaggg
240
tcgttgaat ggcactatcc cgcaggtgca atgggtattt cgttcagaga aggatgaagt
300
ccttggtggc gactgtaaag cgacatggcc gtcgctcggg aggaggaatt gtggtgtccg
360
caccaaatag tgctcaggat gaagttcgtc atggaaatcc ggctccaacc gtttcggggg
420
ctgggtcgca
430

```

<210> 744

<211> 98

<212> PRT

<213> Homo sapiens

<400> 744

Xaa Lys Ser Asp Gly Phe Gly Ser Val Ala Ser Arg Leu Ala Arg Asn
 1 5 10 15
 His Tyr Asp Val Asp Glu Gly Asn Ser Xaa Ile His Val Asn Gln Asp
 20 25 30
 Ile Ala Arg Arg Thr Gly Thr Gly Lys Leu Leu Val Arg Val Cys Pro
 35 40 45
 Ala His Val Tyr Ser Glu Glu Pro Asp Gly Thr Ile Ser Val Glu Tyr
 50 55 60
 Ala Ala Cys Leu Glu Cys Gly Thr Cys Leu Ala Val Ala Ala Pro Gly
 65 70 75 80
 Ser Leu Glu Trp His Tyr Pro Ala Gly Ala Met Gly Ile Ser Phe Arg
 85 90 95
 Glu Gly

<210> 745

<211> 362

<212> DNA

<213> Homo sapiens

<400> 745

cggccgattg aagcgctcgt gcggtttgag tcggtgatgg atgcggtgga cgggtgcttcg
 60
 gcgctcgtggt ggcgcattgg gcggtatttc atcgccgagc ttgaacgcag cagcgagttg
 120
 tatgagcagg cggcgctttac ccgcgatctg gaaagctcgc tgatcaaggg cctgatcctc
 180
 gcccagccga acaactactc cgaagaactg cgcgacgtac tcggcgtgaa gctgccgcat
 240
 tacttgattc gcgcgcggca gtacatccac gacaacgccc gcgaagccgt gcatctggaa
 300
 gacctggaaa ccgctgccgg ggtatcgcgg ttcaagttgt tcgatgcggt tcgcaaatac
 360
 tt
 362

<210> 746

<211> 108

<212> PRT

<213> Homo sapiens

<400> 746

Met Asp Ala Val Asp Gly Ala Ser Ala Ser Trp Trp Arg Met Ala Arg
 1 5 10 15
 Tyr Phe Ile Ala Glu Leu Glu Arg Ser Ser Glu Leu Tyr Glu Gln Ala
 20 25 30
 Ala Phe Thr Arg Asp Leu Glu Ser Ser Leu Ile Lys Gly Leu Ile Leu
 35 40 45
 Ala Gln Pro Asn Asn Tyr Ser Glu Glu Leu Arg Asp Val Leu Gly Val
 50 55 60
 Lys Leu Pro His Tyr Leu Ile Arg Ala Arg Gln Tyr Ile His Asp Asn

```

65              70              75              80
Ala Arg Glu Ala Val His Leu Glu Asp Leu Glu Thr Ala Ala Gly Val
              85              90              95
Ser Arg Phe Lys Leu Phe Asp Ala Phe Arg Lys Tyr
              100              105

```

<210> 747
 <211> 416
 <212> DNA
 <213> Homo sapiens

```

<400> 747
nacgcgttga tcgccgccga ccgtttcatt ccgcaatcac ccgacatggc ggcctatttt
60
ctgaatgccg atggcacgcc taaagccacc ggcacgctgc tcaagaaccc agcgtggcc
120
gccgtgttca aacgtatcgc caaggaagga ccggacgcgc tgtaccacgg gccgattggc
180
gacgagatcg cgcgcaaggt tcagggcaac cgcaatgcgg gcagcctgtc gcaagcggac
240
ctcaaggctt acaccgcaa ggaacgcacg ccgctgtgca ccgactacaa gcaatatcag
300
gtgtgcggca tgccaccgcc gtcgtcaggc gggattgcgg tggcgcagat cctcggcagc
360
ctgcaggccg tggaagcccg cgacccacgc ctggccatcg ccccatgaa accggt
416

```

<210> 748
 <211> 138
 <212> PRT
 <213> Homo sapiens

```

<400> 748
Xaa Ala Leu Ile Ala Ala Asp Arg Phe Ile Pro Gln Ser Pro Asp Met
1      5      10      15
Ala Ala Tyr Phe Leu Asn Ala Asp Gly Thr Pro Lys Ala Thr Gly Thr
      20      25      30
Leu Leu Lys Asn Pro Ala Leu Ala Ala Val Phe Lys Arg Ile Ala Lys
      35      40      45
Glu Gly Pro Asp Ala Leu Tyr His Gly Pro Ile Ala Asp Glu Ile Ala
      50      55      60
Arg Lys Val Gln Gly Asn Arg Asn Ala Gly Ser Leu Ser Gln Ala Asp
65      70      75      80
Leu Lys Ala Tyr Thr Ala Lys Glu Arg Thr Pro Leu Cys Thr Asp Tyr
      85      90      95
Lys Gln Tyr Gln Val Cys Gly Met Pro Pro Pro Ser Ser Gly Gly Ile
      100     105     110
Ala Val Ala Gln Ile Leu Gly Thr Leu Gln Ala Val Glu Ala Arg Asp
      115     120     125
Pro Arg Leu Ala Ile Ala Pro Met Lys Pro
      130     135

```

<210> 749
 <211> 1211

<212> DNA

<213> Homo sapiens

<400> 749

nagtcctaga cgccagaccc gctcagaccc tcttgccagg tgacagccgc caagatgggg
60
tcttggggccc tgctgtggcc tccccgtctg ttccacgggc tgctcggtccg acccccgggg
120
accatggccc aggccagta ctgctctgtg aacaaggaca tctttgaagt agaggagaac
180
acaaatgtca ccgagccgct ggtggacatc cacgtcccgg agggccagga ggtgaccctc
240
ggagccttgt ccacccccctt tgcatttcgg atccaggga accagctgtt tctcaacgtg
300
actcctgatt acgaggagaa gtcactgctt gaggtcagc tgctgtgtca gagcggaggc
360
acattggtga ccagctaag ggtgttcgtg tcagtgtgtg acgtcaatga caatgcccc
420
gaattcccct ttaagaccaa ggagataagg gtggaggagg acacgaaagt gaactccacc
480
gtcatccccg agacgcaact gcaggctgag gaccgcgaca aggacgacat tctgttctac
540
accctccagg aaatgacagc aggtgccagt gactacttct ccctgggtgag tgtaaaccgt
600
cccgccctga ggctggaccg gcccctggac ttctacgagc ggccgaacat gaccttctgg
660
ctgctggtgc gggacactcc gggggagaat gtggaacca gccacactgc caccgccaca
720
ctagtgtga acgtggtgcc cgccgacctg cggccccctg ggttctgtcc ctgcaccttc
780
tcagatggct acgtctgcat tcaagctcag taccacgggg ctgtcccccac ggggcacata
840
ctgccatctc ccctcgtcct gcgtcccga cccatctacg ctgaggacgg agaccgcggc
900
atcaaccagc ccatcatcta cagcatcttt aggggaaacg tgaatggtac attcatcatc
960
caccagact cgggcaacct caccgtggcc aggagtgtcc ccagccccat gaccttcctt
1020
ctgctggtga agggccaaca ggccgacctt gcccgctact cagtgacca ggtcaccgtg
1080
gagggtgtg gctgcgggcg ggagcccgcc ccgcttcccc cagagcctgt atcgtggcac
1140
cgtggcgcggt ggcgtggag cgggcgttgt ggtcaaggat gcagctgccc cttttcagcc
1200
tctgaggatc c
1211

<210> 750

<211> 385

<212> PRT

<213> Homo sapiens

<400> 750

Met Gly Ser Trp Ala Leu Leu Trp Pro Pro Leu Leu Phe Thr Gly Leu

```

      1           5           10           15
Leu Val Arg Pro Pro Gly Thr Met Ala Gln Ala Gln Tyr Cys Ser Val
      20           25           30
Asn Lys Asp Ile Phe Glu Val Glu Asn Thr Asn Val Thr Glu Pro
      35           40           45
Leu Val Asp Ile His Val Pro Glu Gly Gln Glu Val Thr Leu Gly Ala
      50           55           60
Leu Ser Thr Pro Phe Ala Phe Arg Ile Gln Gly Asn Gln Leu Phe Leu
      65           70           75           80
Asn Val Thr Pro Asp Tyr Glu Glu Lys Ser Leu Leu Glu Ala Gln Leu
      85           90           95
Leu Cys Gln Ser Gly Gly Thr Leu Val Thr Gln Leu Arg Val Phe Val
      100          105          110
Ser Val Leu Asp Val Asn Asp Asn Ala Pro Glu Phe Pro Phe Lys Thr
      115          120          125
Lys Glu Ile Arg Val Glu Glu Asp Thr Lys Val Asn Ser Thr Val Ile
      130          135          140
Pro Glu Thr Gln Leu Gln Ala Glu Asp Arg Asp Lys Asp Asp Ile Leu
      145          150          155          160
Phe Tyr Thr Leu Gln Glu Met Thr Ala Gly Ala Ser Asp Tyr Phe Ser
      165          170          175
Leu Val Ser Val Asn Arg Pro Ala Leu Arg Leu Asp Arg Pro Leu Asp
      180          185          190
Phe Tyr Glu Arg Pro Asn Met Thr Phe Trp Leu Leu Val Arg Asp Thr
      195          200          205
Pro Gly Glu Asn Val Glu Pro Ser His Thr Ala Thr Ala Thr Leu Val
      210          215          220
Leu Asn Val Val Pro Ala Asp Leu Arg Pro Pro Trp Phe Leu Pro Cys
      225          230          235          240
Thr Phe Ser Asp Gly Tyr Val Cys Ile Gln Ala Gln Tyr His Gly Ala
      245          250          255
Val Pro Thr Gly His Ile Leu Pro Ser Pro Leu Val Leu Arg Pro Gly
      260          265          270
Pro Ile Tyr Ala Glu Asp Gly Asp Arg Gly Ile Asn Gln Pro Ile Ile
      275          280          285
Tyr Ser Ile Phe Arg Gly Asn Val Asn Gly Thr Phe Ile Ile His Pro
      290          295          300
Asp Ser Gly Asn Leu Thr Val Ala Arg Ser Val Pro Ser Pro Met Thr
      305          310          315          320
Phe Leu Leu Leu Val Lys Gly Gln Gln Ala Asp Leu Ala Arg Tyr Ser
      325          330          335
Val Thr Gln Val Thr Val Glu Gly Cys Gly Cys Gly Arg Glu Pro Ala
      340          345          350
Pro Leu Pro Pro Glu Pro Val Ser Trp His Arg Gly Ala Trp Arg Trp
      355          360          365
Ser Gly Arg Cys Gly Gln Gly Cys Ser Cys Pro Phe Ser Ala Ser Glu
      370          375          380
Asp
385

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<210> 751

<211> 345

<212> DNA

<213> Homo sapiens

<400> 751

cgcgctcgcg tcatcgtaa cgacatgagc gaggtcaaca tcgacgcggc gctggtggcg
60
gcaggcgcg ggctgtcgcg caccgaggag aagctcgtcg agatgtcgaa cggctgcac
120
tgctgcacgc tgcgcgacga cctgatgcag gaagtggcga gactggcggg cgaaggccgc
180
ttcgatgcgc tggatcatga gagcaccggc gtgtccgagc cgatgccggc cgccgccacg
240
ttcgatttcc gtgaccagga cggcgtctcg ctgcgccgacg tcgcgcggtt ggataccatg
300
gtcaccgtcg tcgacgccgc gtccttcctg cgcgactacg gctcg
345

<210> 752

<211> 115

<212> PRT

<213> Homo sapiens

<400> 752

Arg	Val	Ala	Val	Ile	Val	Asn	Asp	Met	Ser	Glu	Val	Asn	Ile	Asp	Ala
1				5					10					15	
Ala	Leu	Val	Ala	Ala	Gly	Gly	Gly	Leu	Ser	Arg	Thr	Glu	Glu	Lys	Leu
			20					25					30		
Val	Glu	Met	Ser	Asn	Gly	Cys	Ile	Cys	Cys	Thr	Leu	Arg	Asp	Asp	Leu
		35					40					45			
Met	Gln	Glu	Val	Ala	Arg	Leu	Ala	Gly	Glu	Gly	Arg	Phe	Asp	Ala	Leu
	50					55				60					
Val	Ile	Glu	Ser	Thr	Gly	Val	Ser	Glu	Pro	Met	Pro	Val	Ala	Ala	Thr
65					70					75				80	
Phe	Asp	Phe	Arg	Asp	Gln	Asp	Gly	Val	Ser	Leu	Ala	Asp	Val	Ala	Arg
			85						90				95		
Leu	Asp	Thr	Met	Val	Thr	Val	Val	Asp	Ala	Ala	Ser	Phe	Leu	Arg	Asp
			100					105					110		
Tyr	Gly	Ser													
															115

<210> 753

<211> 352

<212> DNA

<213> Homo sapiens

<400> 753

gcgcgccagt acgccaagac cgtccgcaag gaccgcaagg gcgaacggcg gcgtcgggcg
60
gcgtcggact agtccacgat gcatccgaac cgcgccttcc gctttgccga tgatgtctcg
120
atgctcgatt tcgcggccaa gcgagccttt gcgcacatct tcgtgagcac gcccgagggg
180
cctatggtag cgcattgccc ggttacgccc ttcgacggag ccttcggctt ccatgtcgcg
240
cgcggcaatc ggatcgcgcg gcacctggat ggcgcgacgc tgctgtctag catcagcgcg
300

accgacggct atatcagccc gagctggtac gccgaccgc agggaccaca gt
352

<210> 754

<211> 91

<212> PRT

<213> Homo sapiens

<400> 754

Met His Pro Asn Arg Ala Phe Arg Phe Ala Asp Asp Val Ser Met Leu
1 5 10 15
Asp Phe Ala Ala Lys Arg Ala Phe Ala His Ile Phe Val Ser Thr Pro
20 25 30
Glu Gly Pro Met Val Ala His Ala Pro Val Thr Pro Phe Asp Gly Ala
35 40 45
Phe Arg Phe His Val Ala Arg Gly Asn Arg Ile Ala Arg His Leu Asp
50 55 60
Gly Ala Thr Leu Leu Leu Ser Ile Ser Ala Thr Asp Gly Tyr Ile Ser
65 70 75 80
Pro Ser Trp Tyr Ala Asp Pro Gln Gly Pro Gln
85 90

<210> 755

<211> 301

<212> DNA

<213> Homo sapiens

<400> 755

tgggatgcag ggtctttctt ctccaaggat ttcattcctg gagggagaaa agggccccag
60
ctgtctgcc tcaaaccggg ttgccgggct ggagctctc ccaggcccgt gtgaggaaga
120
gcaaaggccg gcaggggctc gatgggacca gtcgctcgct caggcccagg aaaaccacac
180
agctgggggc tgtcaggatt ggaccagggt caggccggcc aggcgatggc gggaaaagca
240
ggcccactct gcagacctca atgtctcagg tgcactgcag ggcaaccccg cctaccccg
300
g
301

<210> 756

<211> 99

<212> PRT

<213> Homo sapiens

<400> 756

Met Gln Gly Leu Ser Ser Pro Arg Ile Ser Phe Leu Glu Gly Glu Lys
1 5 10 15
Gly Pro Ser Cys Leu Pro Ser Asn Arg Val Ala Gly Leu Glu Leu Leu
20 25 30
Pro Gly Pro Cys Glu Glu Glu Gln Arg Pro Ala Gly Ala Arg Trp Asp
35 40 45
Gln Ser Leu Ala Gln Ala Gln Glu Asn His Thr Ala Gly Gly Cys Gln

50 55 60
 Asp Trp Thr Arg Val Arg Pro Ala Arg Arg Trp Arg Glu Lys Gln Ala
 65 70 75 80
 His Ser Ala Asp Leu Asn Val Ser Gly Ala Leu Gln Gly Asn Pro Ala
 85 90 95
 Tyr Pro Gly

<210> 757
 <211> 311
 <212> DNA
 <213> Homo sapiens

<400> 757
 actgaggcga tcgccagagg ggtgggctg cgagggctgc tcaacatcca gttcgccctg
 60
 gtctccgatg ttctctacgt catcgaggcc aaccccaggg catcgcgcac agtccccctt
 120
 gtctcaaagg catccggcgt gcagctcgcc aaagcggcgg ccctcatcat gacaggggag
 180
 acgatcgctt cgctcaggcg ctccggccac ctgcccaggg ccgacgccgc cgtcaccgat
 240
 cccgatgacc cgatcgccgt caaggaggcg gtcctaccct tcaaacgatt ccgcaccacc
 300
 gagggacgcg t
 311

<210> 758
 <211> 103
 <212> PRT
 <213> Homo sapiens

<400> 758
 Thr Glu Ala Ile Ala Arg Gly Val Gly Val Arg Gly Leu Leu Asn Ile
 1 5 10 15
 Gln Phe Ala Leu Val Ser Asp Val Leu Tyr Val Ile Glu Ala Asn Pro
 20 25 30
 Arg Ala Ser Arg Thr Val Pro Phe Val Ser Lys Ala Ser Gly Val Gln
 35 40 45
 Leu Ala Lys Ala Ala Ala Leu Ile Met Thr Gly Glu Thr Ile Ala Ser
 50 55 60
 Leu Arg Arg Ser Gly His Leu Pro Glu Ala Asp Ala Ala Val Thr Asp
 65 70 75 80
 Pro Asp Asp Pro Ile Ala Val Lys Glu Ala Val Leu Pro Phe Lys Arg
 85 90 95
 Phe Arg Thr Thr Glu Gly Arg
 100

<210> 759
 <211> 391
 <212> DNA
 <213> Homo sapiens

<400> 759

gtgcacaccg gcaagctggg gtggaactgg gacagcggca acccggacga cactacgccg
60
attgccgagg gcaagaccta caccgcaac tcgccgaaca tgtggtccat gttcgccgtc
120
gacgaaaaac tcggcatgct ctacctgccg atgggcaacc agaccccga ccagttcggg
180
ggctaccgca cgctgcgtc ggaactgcac gctgccggcc tgacagcgtt ggatatcgac
240
actggtaaag tgcgtggca ctaccagttc acccaccatg acctgtggga catggacgtg
300
ggcggccagc cgagcctgat cgacatcaag accgccgccg gcgtgaaaca agccgtgatg
360
gcctcgacca agcaaggcag catctacgct t
391

<210> 760

<211> 130

<212> PRT

<213> Homo sapiens

<400> 760

Val	His	Thr	Gly	Lys	Leu	Val	Trp	Asn	Trp	Asp	Ser	Gly	Asn	Pro	Asp
1				5				10					15		
Asp	Thr	Thr	Pro	Ile	Ala	Glu	Gly	Lys	Thr	Tyr	Thr	Arg	Asn	Ser	Pro
			20					25					30		
Asn	Met	Trp	Ser	Met	Phe	Ala	Val	Asp	Glu	Lys	Leu	Gly	Met	Leu	Tyr
	35						40					45			
Leu	Pro	Met	Gly	Asn	Gln	Thr	Pro	Asp	Gln	Phe	Gly	Gly	Tyr	Arg	Thr
	50				55						60				
Pro	Ala	Ser	Glu	Leu	His	Ala	Ala	Gly	Leu	Thr	Ala	Leu	Asp	Ile	Asp
65				70					75					80	
Thr	Gly	Lys	Val	Arg	Trp	His	Tyr	Gln	Phe	Thr	His	His	Asp	Leu	Trp
			85					90					95		
Asp	Met	Asp	Val	Gly	Gly	Gln	Pro	Ser	Leu	Ile	Asp	Ile	Lys	Thr	Ala
			100				105						110		
Ala	Gly	Val	Lys	Gln	Ala	Val	Met	Ala	Ser	Thr	Lys	Gln	Gly	Ser	Ile
		115					120						125		
Tyr	Ala														
	130														

<210> 761

<211> 324

<212> DNA

<213> Homo sapiens

<400> 761

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60
ctaggagagg ccaatccttc cctgccccac agctccttct ctgcaaagct cagggggcaa
120
tcaggtacct cctgcccag agggcccat ggttcctcgc ctaaggaagg cagggcgggg
180
cattgggagc cggtgacagc tgggctcagc tggggggagg ggtcagtttg ggagcaggtg
240

cagatttcag ggaggggggg gcctaaaggg aagtagggat cttggtaggc tgcaaaattt
 300
 tcctcccat ccccatcca caga
 324

<210> 762
 <211> 105
 <212> PRT
 <213> Homo sapiens

<400> 762
 Met Gly Asp Gly Glu Glu Asn Phe Ala Ala Tyr Gln Asp Pro Tyr Phe
 1 5 10 15
 Pro Leu Gly Pro Pro Leu Pro Glu Ile Cys Thr Cys Ser Gln Thr Asp
 20 25 30
 Pro Ser Pro Gln Leu Ser Pro Ala Val Asn Gly Ser Gln Cys Pro Ala
 35 40 45
 Leu Pro Ser Leu Gly Glu Glu Pro Trp Gly Pro Leu Gly Gln Glu Val
 50 55 60
 Pro Asp Cys Pro Leu Ser Phe Ala Glu Lys Glu Leu Trp Gly Arg Glu
 65 70 75 80
 Gly Leu Ala Ser Pro Arg Arg Tyr Phe Leu Leu His Gln Gly Ser Lys
 85 90 95
 Lys Val Arg Pro Leu Trp Ala Tyr Leu
 100 105

<210> 763
 <211> 301
 <212> DNA
 <213> Homo sapiens

<400> 763
 acgcgttatg ggcggcccg atgggcgatg cgctatccca cacctcgatg atggcggaca
 60
 tcctcggcgg tgtgctggaa gtggcgcca atatcgcat tactgcgggc gcgaccgctg
 120
 ccgcggtggc cgccaccggc tttaccgagg ccaccggcgg cctcggctgc ttctgctgg
 180
 gcgctgcctt gggcaccatt gccggcctgg ccatgagcaa cattggcgcg gacacagggc
 240
 tgaccaagat atgcaatgcc tttacaacg ccttatttgc gccaccgtg catgcgaaca
 300
 t
 301

<210> 764
 <211> 100
 <212> PRT
 <213> Homo sapiens

<400> 764
 Met Phe Ala Cys Thr Val Gly Ala Asn Lys Ala Leu Leu Lys Ala Leu
 1 5 10 15
 His Ile Leu Val Ser Pro Val Ser Ala Pro Met Leu Leu Met Ala Arg

	20		25		30										
Pro	Ala	Met	Val	Pro	Lys	Ala	Ala	Pro	Ser	Arg	Lys	Gln	Pro	Arg	Pro
	35		40		45										
Pro	Val	Ala	Ser	Val	Lys	Pro	Val	Ala	Ala	Thr	Ala	Ala	Ala	Val	Ala
	50		55		60										
Pro	Ala	Val	Ile	Ala	Ile	Leu	Ala	Ala	Thr	Ser	Ser	Thr	Pro	Pro	Arg
65			70		75		80								
Met	Ser	Ala	Ile	Ile	Glu	Val	Trp	Asp	Ser	Ala	Ser	Pro	Ile	Arg	Ala
			85		90		95								
Ala	His	Asn	Ala												
	100														

<210> 765
 <211> 831
 <212> DNA
 <213> Homo sapiens

<400> 765
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 60
 taacattggt gttcctgtat ttaagccct ataacacagg agatgcgcca cctcatcagt
 120
 agcctccaga atcacaatca ccagctgaaa ggggaggtcc tgagatataa gcggaattg
 180
 agagaagccc agtctgacct gaacaagaca cgctgcgta gtggtagtgc cctcctgcag
 240
 tcccagtcta gtactgagga cccgaaggat gagcctgcgg agctaaaacc agattctggg
 300
 gacttaccct ccagtcctc agcttcaaag gcatctcagg aggatgccaa tgaaatcaag
 360
 tctaaacggg atgaagaaga acgagaacga gaaaggaggg agaaggagag ggaacgagaa
 420
 agagaacggg agaaggagaa ggagagagaa cgagagaagc agaagctaaa agagtcagaa
 480
 aaagagagag attctgctaa ggataaagag aaaggcaaac atgatgatgg acggaaaaag
 540
 gaagcagaaa ttatcaaaca attgaagatt gaactcaaga aggcacagga gagccaaaag
 600
 gagatgaaac tattgctgga tatgtaccgt tctgccccaa aggaacagag agacaaagtt
 660
 cagctgatgg cagctgagaa gaagtctaag gcagagttgg aagatctaag gcaaagactc
 720
 aaggatctgg aagataaaga gaagaaagag aacaagaaaa tggctgatga ggatgccttg
 780
 aggaagatcc gggcagtgga ggagcagata gaatacctac agaagaagct a
 831

<210> 766
 <211> 243
 <212> PRT
 <213> Homo sapiens

<400> 766
 Met Arg His Leu Ile Ser Ser Leu Gln Asn His Asn His Gln Leu Lys

```

      1           5           10           15
Gly Glu Val Leu Arg Tyr Lys Arg Lys Leu Arg Glu Ala Gln Ser Asp
      20           25           30
Leu Asn Lys Thr Arg Leu Arg Ser Gly Ser Ala Leu Leu Gln Ser Gln
      35           40           45
Ser Ser Thr Glu Asp Pro Lys Asp Glu Pro Ala Glu Leu Lys Pro Asp
      50           55           60
Ser Gly Asp Leu Ser Ser Gln Ser Ser Ala Ser Lys Ala Ser Gln Glu
      65           70           75           80
Asp Ala Asn Glu Ile Lys Ser Lys Arg Asp Glu Glu Glu Arg Glu Arg
      85           90           95
Glu Arg Arg Glu Lys Glu Arg Glu Arg Glu Arg Glu Arg Glu Lys Glu
      100          105          110
Lys Glu Arg Glu Arg Glu Lys Gln Lys Leu Lys Glu Ser Glu Lys Glu
      115          120          125
Arg Asp Ser Ala Lys Asp Lys Glu Lys Gly Lys His Asp Asp Gly Arg
      130          135          140
Lys Lys Glu Ala Glu Ile Ile Lys Gln Leu Lys Ile Glu Leu Lys Lys
      145          150          155          160
Ala Gln Glu Ser Gln Lys Glu Met Lys Leu Leu Leu Asp Met Tyr Arg
      165          170          175
Ser Ala Pro Lys Glu Gln Arg Asp Lys Val Gln Leu Met Ala Ala Glu
      180          185          190
Lys Lys Ser Lys Ala Glu Leu Glu Asp Leu Arg Gln Arg Leu Lys Asp
      195          200          205
Leu Glu Asp Lys Glu Lys Lys Glu Asn Lys Lys Met Ala Asp Glu Asp
      210          215          220
Ala Leu Arg Lys Ile Arg Ala Val Glu Glu Gln Ile Glu Tyr Leu Gln
      225          230          235          240
Lys Lys Leu

```

<210> 767

<211> 431

<212> DNA

<213> Homo sapiens

<400> 767

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gctagctcgc tcgcactcat tctcgggagg cttccccgcg ccggccgcgt cccgcccgcg
60
ccccggcacc agaagttcct ctgcgcgtcc gacggcgaca tgggcgtccc caccgccccg
120
gaggccggca gctggcgctg gggatccctg ctcttcgctc tcttcctggc tgcgtcccta
180
ggtcgggtgg cagccttcaa ggctgccacg ccgtattccc tgtatgtctg tcccgagggg
240
cagaacgtca cctcacctg caggctcttg ggccctgtgg acaaagggca cgatgtgacc
300
ttctacaaga cgtggtaccg cagctcgagg ggcgaggtgc agacctgctc agagcgccgg
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420
aacaccagcc a
431

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<210> 768
 <211> 110
 <212> PRT
 <213> Homo sapiens

<400> 768
 Met Gly Val Pro Thr Ala Pro Glu Ala Gly Ser Trp Arg Trp Gly Ser
 1 5 10 15
 Leu Leu Phe Ala Leu Phe Leu Ala Ala Ser Leu Gly Pro Val Ala Ala
 20 25 30
 Phe Lys Val Ala Thr Pro Tyr Ser Leu Tyr Val Cys Pro Glu Gly Gln
 35 40 45
 Asn Val Thr Leu Thr Cys Arg Leu Leu Gly Pro Val Asp Lys Gly His
 50 55 60
 Asp Val Thr Phe Tyr Lys Thr Trp Tyr Arg Ser Ser Arg Gly Glu Val
 65 70 75 80
 Gln Thr Cys Ser Glu Arg Arg Pro Ile Arg Asn Leu Thr Phe Gln Asp
 85 90 95
 Leu His Leu His His Gly Gly His Gln Ala Ala Asn Thr Ser
 100 105 110

<210> 769
 <211> 422
 <212> DNA
 <213> Homo sapiens

<400> 769
 tgtacacctc gtaatacatg atcgcgatac cgcccgcgat gaccctaagc aactcattct
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 cgacttcgaa ctccatcaag tgatttttgc ggtcgacgaa tctggtttcc gtatgaaaga
 120
 acggtatggt ttgtatgtcg cggccctgcc actcaaacct caccgtgtca cccacctcaa
 180
 aaaaatcccg ggtcggccca caaataaatc aattgcgcgc ctctccgag ttcttccatg
 240
 tcaacgatct cccctggctg ctcaagccaa ggcctcgcgc gccgtgggac tccaagggtg
 300
 acgttgaccc gactgatttc ggaccagttg gcgtcggtat tgggggcagg gtagttaccg
 360
 cccatgtcga tgatctacat cgccaccggc agcgtgtctt cgtagtcgtc atgcctgac
 420
 an
 422

<210> 770
 <211> 99
 <212> PRT
 <213> Homo sapiens

<400> 770
 Met Phe Cys Met Ser Arg Pro Cys His Ser Asn Leu Thr Val Ser Pro
 1 5 10 15
 Thr Ser Lys Lys Ser Arg Val Gly Pro Gln Ile Asn Gln Leu Arg Arg

```

                20                25                30
Ser Ser Glu Phe Phe His Val Asn Asp Leu Pro Trp Leu Leu Lys Pro
                35                40                45
Arg Pro Ser Arg Pro Trp Asp Ser Lys Val Asp Val Asp Pro Thr Asp
                50                55                60
Phe Gly Pro Val Gly Val Gly Ile Gly Gly Arg Val Val Thr Ala His
65                70                75                80
Val Asp Asp Leu His Arg His Arg Gln Arg Val Phe Val Val Val Met
                85                90                95
Pro Asp Xaa

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<210> 771
 <211> 369
 <212> DNA
 <213> Homo sapiens

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<400> 771
gcctacgcgc aattcctcgc gggatatggcg tttaacaatg cgtctctcgg gtatgtgcat
60
gcaatggcgc atcagctggg cggtttttac gatctgccgc acggcgtgtg caatgcgata
120
ctgttgccac acgtgcagac gtttaactgc aaagtggcgg cctcgcgcct gcgtgattgc
180
gcccaggcca tgggtgtcga tgtcagtcaa atgacagcag aacagggcgc acaggcgtgt
240
atcgagagaga ttgcgtctct ggcacgtcag gtgaatatcc cggtgggatt gcgtgacctc
300
aacgtgaagg aagcggactt cccgattctg gcgaccaacg cgctaaaaga cctgtgggt
360
ttgattaat
369

```

<210> 772
 <211> 123
 <212> PRT
 <213> Homo sapiens

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<400> 772
Ala Tyr Ala Gln Phe Leu Ala Gly Met Ala Phe Asn Asn Ala Ser Leu
1                5                10                15
Gly Tyr Val His Ala Met Ala His Gln Leu Gly Gly Phe Tyr Asp Leu
                20                25                30
Pro His Gly Val Cys Asn Ala Ile Leu Leu Pro His Val Gln Thr Phe
                35                40                45
Asn Cys Lys Val Ala Ala Ser Arg Leu Arg Asp Cys Ala Gln Ala Met
                50                55                60
Gly Val Asp Val Ser Gln Met Thr Ala Glu Gln Gly Ala Gln Ala Cys
65                70                75                80
Ile Ala Glu Ile Arg Ser Leu Ala Arg Gln Val Asn Ile Pro Val Gly
                85                90                95
Leu Arg Asp Leu Asn Val Lys Glu Ala Asp Phe Pro Ile Leu Ala Thr
                100                105                110
Asn Ala Leu Lys Asp Pro Val Gly Leu Ile Asn

```

115

120

<210> 773
 <211> 309
 <212> DNA
 <213> Homo sapiens

<400> 773
 ccgccgttgc cggcgggtgga ttttctggta ggcttgaatc agcgcttggc tgccgacatc
 60
 gggttacttga tccgcgtgga gccgggcgta caaactccgg aattcacccct ggaaaacgcc
 120
 tccggttctc gccgggattc ggcggtggtg ctggtgcaac tgctgcgcaa cctggggcctg
 180
 gcggcgcgat ttgtgtctgg ctatctgac caactgaccg ccgacgtcaa agccctcgac
 240
 ggccccgtccg gcaccgaggt ggatttcacc gacctgcatg cctgggtgga agtgatattg
 300
 cccggcgcc
 309

<210> 774
 <211> 103
 <212> PRT
 <213> Homo sapiens

<400> 774
 Pro Pro Leu Pro Ala Val Asp Phe Leu Val Gly Leu Asn Gln Arg Leu
 1 5 10 15
 Ala Ala Asp Ile Gly Tyr Leu Ile Arg Val Glu Pro Gly Val Gln Thr
 20 25 30
 Pro Glu Phe Thr Leu Glu Asn Ala Ser Gly Ser Cys Arg Asp Ser Ala
 35 40 45
 Trp Leu Leu Val Gln Leu Leu Arg Asn Leu Gly Leu Ala Ala Arg Phe
 50 55 60
 Val Ser Gly Tyr Leu Ile Gln Leu Thr Ala Asp Val Lys Ala Leu Asp
 65 70 75 80
 Gly Pro Ser Gly Thr Glu Val Asp Phe Thr Asp Leu His Ala Trp Cys
 85 90 95
 Glu Val Tyr Leu Pro Gly Ala
 100

<210> 775
 <211> 4125
 <212> DNA
 <213> Homo sapiens

<400> 775
 nncaggatgg gcgcgaacaa tggcaaacag tacggcagtg agggcaaagg cagctcgagc
 60
 atctcatctg acgtgagttc aagtacagat cacacgcca cttaaagcca gaagaatgtg
 120
 gctaccagcg aagactccga cctgagcatg cgcacactga gcacgcccag cccagccctg
 180

atatgtccac cgaatctccc aggatttcag aatggaagg gctcgtccac ctctctgtcc
240
tccatcaccg gggagacggg ggccatgggt cactccccgc ccccgaccg cctcacacac
300
ccgtctatcc ggtcgcctc cagaccccag aaggatcagg ccagcataga ccgggtccccg
360
gaccactcca tgggtgcagat cttctccttc ctgcccacca accagctgtg ccgctgcgcg
420
cgagtgtgcc gccgctggta caacctggcc tgggaccgc ggctctggag gactatccgc
480
ctgacgggag agaccatcaa cgtggaccgc gccctcaagg tgctgaccg cagactctgc
540
caggacaccc ccaacgtgtg totcatgtg gaaaccgtaa ctgtcagtgg ctgcaggcgg
600
ctcacagacc gagggctgta caccatcgcc cagtgtgtcc ccgaactgag gcgactggaa
660
gtctcaggct gttacaatat ctccaacgag gccgtctttg atgtgggtgc cctctgccct
720
aatctggagc acctggatgt gtcaggatgc tccaaagtga cctgcatcag cttgaccggg
780
gaggcctcca ttaactgtc acccttgcat ggcaaacaga tttccatccg ctacctggac
840
atgacggact gcttcgtgct ggaggacgaa ggccctgcaca ccatcgcgcc gcactgcacg
900
cagctcacc accctctacct gcgccgtgc gtccgcctga ccgacgaagg cctgcgtac
960
ctggtgatct actgcgcctc catcaaggag ctgagcgtca gcgactgccg cttcgtcagc
1020
gacttcggcc tgggggagat cgccaagctg gagtcccgcc tgcggtacct gagcatcgcg
1080
cactgcggcc gggtcaccga cgtgggcac cgtacgtgg ccaagtactg cagcaagctg
1140
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1200
aagaactgca ccaaactcaa atccctggat atcggcaa at gccctttggt atccgacag
1260
ggcctggagt gcctggccct gaactgctc aacctcaagc ggctcagcct caagtccctgc
1320
gagagcatca ccggccaggg cttgcagatc gtggccgcca actgctttga cctccagacg
1380
ctgaatgtcc aggactgcga ggtctccgtg gaggccctgc gctttgtcaa acgccactgc
1440
aagcgtgcg tcatcgagca caccaaccg gctttcttct gaaggacag agttcatccg
1500
gcgttgatt cacacaaacc tgaacaaagc aaattttttt aaaagcagcg tatgtaagca
1560
ccgacacca ctcaaaacag ctctttcttc cgggaagggt attaggaatc tggcctttat
1620
ttttctcat ttctcatggg caacagaggc caaagaaacg aagcaagaca aacagcaaac
1680
aggcattttg gtcaggatc ttgtaggcag tttctcttct caaaaagat gtacttaagc
1740
aggctgatcg ctgttccttg agcaaggcgc ttactctcct ccgctcaggc cccaaggcc
1800

gccctttccc tcgcacacag gccccacccc cacagttcca cgcccccccc ccaaggccac
1860
accctccctc cctagagcag cagcgaggat ccatcatcag aatcacagtg ctctccagac
1920
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1980
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<210> 776

<211> 483

<212> PRT

<213> Homo sapiens

<400> 776

Tyr	Gly	Ser	Glu	Gly	Lys	Gly	Ser	Ser	Ser	Ile	Ser	Ser	Asp	Val	Ser
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Ser	Ser	Thr	Asp	His	Thr	Pro	Thr	Lys	Ala	Gln	Lys	Asn	Val	Ala	Thr
			20					25					30		
Ser	Glu	Asp	Ser	Asp	Leu	Ser	Met	Arg	Thr	Leu	Ser	Thr	Pro	Ser	Pro
			35				40					45			
Ala	Leu	Ile	Cys	Pro	Pro	Asn	Leu	Pro	Gly	Phe	Gln	Asn	Gly	Arg	Gly
			50				55					60			
Ser	Ser	Thr	Ser	Ser	Ser	Ser	Ile	Thr	Gly	Glu	Thr	Val	Ala	Met	Val
65						70				75					80
His	Ser	Pro	Pro	Pro	Thr	Arg	Leu	Thr	His	Pro	Leu	Ile	Arg	Leu	Ala
					85				90					95	
Ser	Arg	Pro	Gln	Lys	Asp	Gln	Ala	Ser	Ile	Asp	Arg	Leu	Pro	Asp	His
			100						105					110	
Ser	Met	Val	Gln	Ile	Phe	Ser	Phe	Leu	Pro	Thr	Asn	Gln	Leu	Cys	Arg
			115				120					125			
Cys	Ala	Arg	Val	Cys	Arg	Arg	Trp	Tyr	Asn	Leu	Ala	Trp	Asp	Pro	Arg
			130				135					140			
Leu	Trp	Arg	Thr	Ile	Arg	Leu	Thr	Gly	Glu	Thr	Ile	Asn	Val	Asp	Arg
145					150					155					160
Ala	Leu	Lys	Val	Leu	Thr	Arg	Arg	Leu	Cys	Gln	Asp	Thr	Pro	Asn	Val
					165				170					175	
Cys	Leu	Met	Leu	Glu	Thr	Val	Thr	Val	Ser	Gly	Cys	Arg	Arg	Leu	Thr

```
<210> 777
<211> 705
<212> DNA
<213> Homo sapiens
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843

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 360
 tcaccaggag ggaaccgccg caatgaccgc cggacgtcca gcaacacttg ttggtagtcc
 420
 ttgctcatct gccgtagggt cttccctgat ataggagggt ggctattggc attgacattg
 480
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 gccatgcgtc taagggcagc cacatcagt ggcactctgt tcagagcctg gtgtatctct
 600
 aacactttct ttttcctttt ggcgttaaag tctgccttct ccgcgccgcc gtcccagtgg
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 705

<210> 778

<211> 134

<212> PRT

<213> Homo sapiens

<400> 778

Met	Ala	Ser	Gly	Val	Arg	Arg	Gly	Arg	Pro	Thr	Ser	Gly	His	Trp	Asp
1			5					10					15		
Gly	Gly	Ala	Glu	Lys	Ala	Asp	Phe	Asn	Ala	Lys	Arg	Lys	Lys	Lys	Val
		20						25					30		
Leu	Glu	Ile	His	Gln	Ala	Leu	Asn	Ser	Asp	Pro	Thr	Asp	Val	Ala	Ala
		35					40					45			
Leu	Arg	Arg	Met	Ala	Ile	Ser	Glu	Gly	Gly	Leu	Leu	Thr	Asp	Glu	Ile
	50					55				60					
Arg	Arg	Lys	Val	Trp	Pro	Lys	Leu	Leu	Asn	Val	Asn	Ala	Asn	Asp	Pro
65					70				75					80	
Pro	Pro	Ile	Ser	Gly	Lys	Asn	Leu	Arg	Gln	Met	Ser	Lys	Asp	Tyr	Gln
			85					90						95	
Gln	Val	Leu	Leu	Asp	Val	Arg	Arg	Ser	Leu	Arg	Arg	Phe	Pro	Pro	Gly
		100						105					110		
Glu	Lys	Leu	Ser	Arg	Ser	Cys	His	Ile	Trp	Glu	Glu	Arg	Ile	Cys	Phe
		115					120					125			
Arg	Ser	Tyr	His	Val	Thr										
		130													

<210> 779

<211> 322

<212> DNA

<213> Homo sapiens

<400> 779

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 gactgtgagt gattctgagg ataccgttgc gccgtcccag ctggttcgat cccctcgtaa
 120
 cgccttgccct ttgaaggaac ccagtgggaa ggctagacca agtaaatatg aatcaccaaa
 180

cgccagcaac ttcacgtca ggcattgtggc aactggcaaa gagggcactg atgatgagta
 240
 tgctaactca aactactact actcgatgtc tgccaatcga ctaggagacg aggaaacgga
 300
 ggaaatgata ggtttggcta cc
 322

<210> 780
 <211> 105
 <212> PRT
 <213> Homo sapiens

<400> 780
 Met Cys Lys Gln Phe Asn Asp Val Val Arg Arg His Gly Val His His
 1 5 10 15
 Ser Val Thr Val Ser Asp Ser Glu Asp Thr Val Ala Pro Ser Gln Leu
 20 25 30
 Val Arg Ser Pro Arg Asn Ala Leu Pro Leu Lys Glu Pro Ser Gly Lys
 35 40 45
 Ala Arg Pro Ser Lys Tyr Glu Ser Pro Asn Ala Ser Asn Phe Ile Val
 50 55 60
 Arg His Val Ala Thr Gly Lys Glu Gly Thr Asp Asp Glu Tyr Ala Asn
 65 70 75 80
 Ser Asn Tyr Tyr Tyr Ser Met Ser Ala Asn Arg Leu Gly Asp Glu Glu
 85 90 95
 Thr Glu Glu Met Ile Gly Leu Ala Thr
 100 105

<210> 781
 <211> 297
 <212> DNA
 <213> Homo sapiens

<400> 781
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 120
 gaatgtgtgt ctgtgtatgg aatatgtgtg agtatngaa tgtgtgtgtg tggtttggaat
 180
 gtatcgaatg tgtgtctgtg tgtaaggaat gtgtgtgtat ggaatgtgtt tacgtgcatg
 240
 tgtctggaat gtgtgtgtat ggaatgtgtg tgtatgtgta tgngaattgt tgtgtgt
 297

<210> 782
 <211> 99
 <212> PRT
 <213> Homo sapiens

<400> 782
 Xaa Arg Val Pro Gly Met Cys Val Cys Val Cys Val Cys Met Tyr Val
 1 5 10 15
 Cys Met Glu Cys Val Cys Met Xaa Ile Cys Val Cys Met Xaa Met Cys

	20		25		30										
Val	Cys	Val	Trp	Asn	Val	Cys	Met	Glu	Cys	Val	Ser	Val	Tyr	Gly	Ile
	35						40					45			
Cys	Val	Ser	Met	Xaa	Met	Cys	Val	Cys	Val	Trp	Asn	Val	Ser	Asn	Val
	50						55				60				
Cys	Leu	Cys	Val	Arg	Asn	Val	Cys	Val	Trp	Asn	Val	Phe	Thr	Cys	Met
65					70					75				80	
Cys	Leu	Glu	Cys	Val	Cys	Met	Glu	Cys	Val	Cys	Met	Cys	Met	Xaa	Met
			85					90						95	
Cys	Val	Cys													

<210> 783
 <211> 612
 <212> DNA
 <213> Homo sapiens

<400> 783
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 120
 tttgttgagc acgtcgatga cgggcaactt caaggaaatc caggtgcgga cttgcgcggt
 180
 ccgcacaaaa atcggctggg tgtcgatcaa ctgcgggttg ccaatcgag aatttgcgcg
 240
 gttcgatgac acgtgtcttc accgtgatat tcagcagccc cagtacgtcc accggcaact
 300
 cgacggccac cgcgtggct ttgttgaca gctgcacaaa gccctgaatc aggttgaaca
 360
 gttgcagggt gacgtccagg gcgctcttgt ccgtgccgtt ttgtatattg atcaggtcgc
 420
 ccaggtgcag gatctgcgtg cctggggcaa tcagcttgat tgcttcgagg ttattgatca
 480
 ccacctggac cgcattaccg ccagcttga gcacatcgat ggcggcctgg atcaactggc
 540
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 600
 tggccgacgc gt
 612

<210> 784
 <211> 190
 <212> PRT
 <213> Homo sapiens

<400> 784
 Met Ser Ile Cys Val Pro Gly Thr Gly Ser Ser Glu Leu Pro Ser Ser
 1 5 10 15
 Lys Pro Thr Thr Ser Val Thr Arg Pro Ile Thr Leu Leu Ser Thr Ser
 20 25 30
 Met Thr Gly Asn Phe Lys Glu Ile Gln Val Arg Thr Cys Ala Val Arg
 35 40 45
 Thr Lys Ile Gly Trp Val Ser Ile Asn Cys Gly Leu Pro Ile Ala Glu

```

      50              55              60
Phe Ala Arg Phe Asp Asp Thr Cys Leu His Arg Asp Ile Gln Gln Pro
65              70              75              80
Gln Tyr Val His Arg Gln Leu Asp Gly His Arg Ala Gly Phe Val Gly
      85              90              95
Gln Leu His Lys Ala Leu Asn Gln Val Glu Gln Leu Gln Val Asp Val
      100              105              110
Gln Gly Ala Leu Val Arg Ala Val Leu Tyr Ile Asp Gln Val Ala Gln
      115              120              125
Val Gln Asp Leu Arg Ala Trp Gly Asn Gln Leu Asp Cys Phe Glu Val
      130              135              140
Ile Asp His His Leu Asp Arg Ile Thr Ala Gln Leu Glu His Ile Asp
145              150              155              160
Gly Gly Leu Asp Gln Leu Ala Asp Gly Arg Val Gly Leu Glu Gln Leu
      165              170              175
Val Val Val Ala Gly Ala Asp Val Glu Ala Asp Gly Arg Arg
      180              185              190

```

<210> 785
 <211> 408
 <212> DNA
 <213> Homo sapiens

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<400> 785
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cttcaggcgcg cccacgctcg tggctctgtca gtactgctcg acgggggtggt caaccacgtc
120
tcgcgtcgca accgcatcgt gcaggatgcg cagagtgcgtg ggccagattc agacgccggc
180
cgtatgggttc gctggtgtga ggggcgcctc gacgttttcg agggtcatag tgacctggtc
240
gcactcaacc acgacaaccc cgcagtgcgg gaacatgtca cccggatcat gaactattgg
300
tgcggtcgcg gtgttgacgg ctggcggctg gacgccgcta ttccgtcaat cctgagttct
360
gggctgcggt gctgcctccg gtgcgagaga agcgccctga cgtgagga
408

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<210> 786
 <211> 134
 <212> PRT
 <213> Homo sapiens

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<400> 786
Thr Leu Asp Tyr Phe Thr Ile Asp Pro Arg Leu Gly Asp Asp Asp Asp
1      5      10      15
Phe Asp His Leu Leu Gln Ala Ala His Ala Arg Gly Leu Ser Val Leu
      20      25      30
Leu Asp Gly Val Val Asn His Val Ser Arg Arg Asn Arg Ile Val Gln
      35      40      45
Asp Ala Gln Ser Ala Gly Pro Asp Ser Asp Ala Gly Arg Met Val Arg
      50      55      60
Trp Cys Glu Gly Arg Leu Asp Val Phe Glu Gly His Ser Asp Leu Val

```

```

65           70           75           80
Ala Leu Asn His Asp Asn Pro Ala Val Arg Glu His Val Thr Arg Ile
           85           90           95
Met Asn Tyr Trp Cys Gly Arg Gly Val Asp Gly Trp Arg Leu Asp Ala
           100          105          110
Ala Ile Pro Ser Ile Leu Ser Ser Gly Leu Arg Cys Cys Leu Arg Cys
           115          120          125
Glu Arg Ser Ala Leu Thr
           130

```

```

<210> 787
<211> 310
<212> DNA
<213> Homo sapiens

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<400> 787
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60
gttggaacca cagacgatgc cagccttggtg tcagcagtgc gacactggcc cacgtggcgt
120
ccttggtctc tcttcattgc tgccgtcact gtgtgctggg catgccctgc agttacccca
180
aagctttatg tcacaacatt gaggctggcg gagaagacc ggccccttca cccacctta
240
gacttcttgg aagggccgcc cgggtccaca acctggcccc ttaactccct gggcagctgc
300
tggggggagaa
310

```

```

<210> 788
<211> 90
<212> PRT
<213> Homo sapiens

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```

<400> 788
Met Met Leu Val Ala Asp Thr Val Gly Thr Thr Asp Asp Ala Thr Leu
1           5           10           15
Val Ser Ala Val Arg His Trp Pro Thr Trp Arg Pro Trp Ser Leu Leu
           20           25           30
Ile Ala Ala Val Thr Val Cys Trp Ala Cys Pro Ala Val Thr Pro Lys
           35           40           45
Leu Tyr Val Thr Thr Leu Arg Leu Ala Glu Lys Asp Arg Pro Leu His
           50           55           60
Pro Thr Leu Asp Phe Leu Glu Gly Pro Pro Gly Ser Thr Thr Trp Pro
65           70           75           80
Val Asn Ser Leu Gly Ser Cys Trp Gly Arg
           85           90

```

```

<210> 789
<211> 369
<212> DNA
<213> Homo sapiens

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<400> 789

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 120
 gcacgaggtg ttccaaagtg caaacaagct gctgttaaata aattattccc aaacgccaaa
 180
 gcccttgctg gtttgcttgc ttgctttttt ctttttttgc ctgcacaga tatcgctagg
 240
 gcagagtatt gacatttcgt tttctttttg ttatgggtga taaagcacgg tgtttcttgt
 300
 gagtgatgc ctgtatttcc ctgcagagct gattgccagt ccattttctt ctatcccatc
 360
 cccattttc
 369

<210> 790

<211> 114

<212> PRT

<213> Homo sapiens

<400> 790

Met	Asp	Trp	Gln	Ser	Ala	Leu	Gln	Gly	Asn	Thr	Gly	Ile	His	Ser	Gln
1			5					10					15		
Glu	Thr	Pro	Cys	Phe	Ile	Thr	His	Asn	Lys	Lys	Lys	Thr	Lys	Cys	Gln
		20						25				30			
Tyr	Ser	Ala	Leu	Ala	Ile	Ser	Val	Arg	Gly	Lys	Lys	Arg	Lys	Lys	Gln
		35					40					45			
Ala	Ser	Lys	Pro	Ala	Arg	Ala	Leu	Ala	Phe	Gly	Asn	Asn	Tyr	Leu	Thr
		50				55				60					
Ala	Ala	Cys	Leu	His	Phe	Gly	Thr	Pro	Arg	Ala	Ser	Arg	Ala	Gly	Pro
65				70					75				80		
Ser	Cys	Trp	Gly	Gly	Glu	Arg	Ser	Gln	Arg	Cys	Cys	Leu	Ala	Asp	Leu
			85					90				95			
Gly	Phe	Gly	Gly	His	Gln	Lys	Arg	Gly	Arg	Leu	Leu	Ala	Ala	Ala	Thr
		100					105					110			
Ser	Arg														

<210> 791

<211> 420

<212> DNA

<213> Homo sapiens

<400> 791

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 120
 agaatcaaaa tggaagaggt gggtaatgtg tggtcactgg aaatttctaa cattcaaaaa
 180
 ggagaagggg gagagtacat gtgtcatgct gtaaacaatca taggggaagc aaagagcttt
 240
 gcaaatgtag acataatgcc ccaggaagaa agagtgggtg cactaccacc tccagtaaca
 300

catcagcatg tcatggagtt tgatttgga cacaccacat catcaagaac accttctcct
 360
 caagaaattg tcctggaagt tgaattaagt gaaaaagacg ttaaagaatt tgagaagcag
 420

<210> 792
 <211> 138
 <212> PRT
 <213> Homo sapiens

<400> 792
 Thr Lys Arg Lys Val Tyr Glu Asn Thr Thr Leu Gly Phe Ile Val Glu
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 Val Glu Gly Leu Pro Val Pro Gly Val Lys Trp Tyr Arg Asn Lys Ser
 20 25 30
 Leu Leu Glu Pro Asp Glu Arg Ile Lys Met Glu Arg Val Gly Asn Val
 35 40 45
 Cys Ser Leu Glu Ile Ser Asn Ile Gln Lys Gly Glu Gly Gly Glu Tyr
 50 55 60
 Met Cys His Ala Val Asn Ile Ile Gly Glu Ala Lys Ser Phe Ala Asn
 65 70 75 80
 Val Asp Ile Met Pro Gln Glu Glu Arg Val Val Ala Leu Pro Pro Pro
 85 90 95
 Val Thr His Gln His Val Met Glu Phe Asp Leu Glu His Thr Thr Ser
 100 105 110
 Ser Arg Thr Pro Ser Pro Gln Glu Ile Val Leu Glu Val Glu Leu Ser
 115 120 125
 Glu Lys Asp Val Lys Glu Phe Glu Lys Gln
 130 135

<210> 793
 <211> 479
 <212> DNA
 <213> Homo sapiens

<400> 793
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 ccgcgaacag tactgcggga acccaaacga tcatttttaa cccagacgt ccctgaacca
 120
 aagccaaagt ctacaggtca ctggggcaga ggccgcccga aaccagcttc cctcccggc
 180
 ctaggcgcgc caggtccccg cccagccggg gcgacccctt ggtcggacag tgagggtggg
 240
 agcccaccgc acccaagtcc gccgcatcca cccggcgag gcgacccccg acgggcagcc
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 360
 gcggaggctg ggccggcggc ttcgcgcctg cctcagtctc cccatccgtg gcccggggga
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 tggagccgcg tgcgcgcaga ggctgcggca ggtcccagcc aggtgccttg gaacgtgga
 479

<210> 794

<211> 159

<212> PRT

<213> Homo sapiens

<400> 794

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Xaa Ala Cys Arg Phe Ser Glu Ile His Tyr Gly Asn Val Arg Val Val
 1           5           10           15
Glu Met Leu Arg Pro Arg Thr Val Leu Arg Glu Pro Lys Arg Ser Phe
      20           25           30
Leu Thr Pro Asp Val Pro Glu Pro Lys Pro Lys Ser Thr Gly His Trp
      35           40           45
Gly Arg Gly Arg Pro Lys Pro Ala Ser Pro Pro Gly Leu Gly Ala Pro
      50           55           60
Gly Pro Arg Pro Ala Gly Ala Ile Leu Trp Ser Asp Ser Glu Val Gly
65           70           75           80
Ser Pro Pro His Pro Ser Pro Pro His Pro Pro Gly Ala Gly Asp Pro
      85           90           95
Arg Arg Ala Ala Ala His Leu Leu Leu Ala Pro Ala Ser Gly Lys Leu
      100          105          110
Pro Gly Gly Gly Arg Gly Ser Leu Ala Glu Ala Gly Arg Arg Ala Ser
      115          120          125
Arg Leu Pro Gln Ser Pro His Pro Trp Pro Gly Gly Trp Ser Pro Leu
      130          135          140
Arg Ala Glu Ala Ala Ala Gly Pro Ser Gln Val Pro Trp Asn Val
145          150          155

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<210> 795

<211> 1418

<212> DNA

<213> Homo sapiens

<400> 795

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gccggcgccg gggaggccgg ggcctgcagg cccccgtac gacaagatcc ggactccggc
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ccggactacg aggcgctgcc ggctggagcc actgtcacca cgcacatggt ggcaggcgcc
120
gtggcagggg tcttgagca ctgcgtgatg taccatcg actgcgtcaa gaccggatg
180
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420
acattacttc atgatgcagc catgaaccct gcggaaggct gatctgctga cttggggctc
480
tgaatctgga tactctccat caccggttgg ctgctgtcac catttccttc ctggttgatg
540
gcactactag tggtaagca gaggatgcag atgtacaact caccatacca ccgggtgaca
600
gactgtgtac gggcagtggt gcaaaatgaa ggggcccggg ccttttaccg cagctacacc
660

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acccagctga ccatgaacgt tcctttccaa gccattcact tcatgaccta tgaattcctg
 720
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<210> 796

<211> 176

<212> PRT

<213> Homo sapiens

<400> 796

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170

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 <211> 585
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 <212> PRT
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 35 40 45
 Ser Ser Glu Ile Tyr Gly Arg Thr Lys Ser Gly Ile Ala Ile Gly Gly
 50 55 60
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 Asn Thr Gly Asp Lys Ala Val Lys Ser Lys His Gly Met Leu Thr Thr
 100 105 110
 Ile Ala Cys Gly Pro Arg Gly Glu Val Ala Tyr Ala Leu Glu Gly Ala
 115 120 125
 Val Phe Asn Gly Gly Ser Pro Val Gln Trp Leu Arg Asp Glu Leu Lys
 130 135 140
 Ile Ile Ala Asp Ala Thr Asp Thr Glu Tyr Phe Ala Gly Lys Val Lys

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Pro	Tyr	Trp	Asp	Pro	Tyr	Ala	Arg	Gly	Ala	Leu	Phe	Gly	Leu	Thr	Arg
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<212> DNA

<213> Homo sapiens

<400> 799

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<213> Homo sapiens

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			20					25					30		
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		35					40					45			
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	50					55					60				
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65				70				75						80	
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<211> 424

<212> DNA

<213> Homo sapiens

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Arg Leu His Ser Thr Lys Asn Lys Ile Thr Leu Asn Gly Lys Pro Leu
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Glu Ser Tyr Lys Gly Arg Glu Phe Ala Gln Leu Val Ala Val Leu Thr
      65             70             75             80
Gln Ser Arg Asp Ala Met Ile Asp Asp Phe Leu Val Lys Asp Ile Val
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<213> Homo sapiens

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<210> 804

<211> 1400

<212> PRT

<213> Homo sapiens

<400> 804

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Pro	Arg	Lys	Ala	Glu	Pro	His	Ser	Phe	Arg	Glu	Lys	Val	Phe	Arg	Lys
		20					25						30		
Lys	Pro	Pro	Val	Cys	Ala	Val	Cys	Lys	Val	Thr	Ile	Asp	Gly	Thr	Gly
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Asn	Thr	Ala	Pro	Val	Arg	Arg	Ile	Glu	His	Leu	Gly	Ser	Thr	Lys	Ser
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Leu	Asn	His	Ser	Lys	Gln	Arg	Ser	Thr	Leu	Pro	Arg	Ser	Phe	Ser	Leu
		100					105						110		
Asp	Pro	Leu	Met	Glu	Arg	Arg	Trp	Asp	Leu	Asp	Leu	Thr	Tyr	Val	Thr
	115					120						125			
Glu	Arg	Ile	Leu	Ala	Ala	Ala	Phe	Pro	Ala	Arg	Pro	Asp	Glu	Gln	Arg
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His	Arg	Gly	His	Leu	Arg	Glu	Leu	Ala	His	Val	Leu	Gln	Ser	Lys	His
145				150					155					160	
Arg	Asp	Lys	Tyr	Leu	Leu	Phe	Asn	Leu	Ser	Glu	Lys	Arg	His	Asp	Leu
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		260					265					270			
Arg	Tyr	Ile	Ser	Tyr	Phe	Ser	Gly	Leu	Leu	Ser	Gly	Ser	Ile	Arg	Met
	275					280					285				
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862

863

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 Pro Val Glu Gln Leu Val Arg His Phe Leu Ile Glu Thr Gly Pro Lys
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 Gly Val Lys Ile Lys Gly Cys Pro Ser Glu Pro Tyr Phe Gly Ser Leu
 1205 1210 1215
 Ser Ala Leu Val Ser Gln His Ser Ile Ser Pro Ile Ser Leu Pro Cys
 1220 1225 1230
 Cys Leu Arg Ile Pro Ser Lys Asp Pro Leu Glu Glu Thr Pro Glu Ala
 1235 1240 1245
 Pro Val Pro Thr Asn Met Ser Thr Ala Ala Asp Leu Leu Arg Gln Gly
 1250 1255 1260
 Ala Ala Cys Ser Val Leu Tyr Leu Thr Ser Val Glu Thr Glu Ser Leu
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 Thr Gly Pro Gln Ala Val Ala Arg Ala Ser Ser Ala Ala Leu Ser Cys
 1285 1290 1295
 Ser Pro Arg Pro Thr Pro Ala Val Val His Phe Lys Val Ser Ala Gln
 1300 1305 1310
 Gly Ile Thr Leu Thr Asp Asn Gln Arg Lys Leu Phe Phe Arg Arg His
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 Tyr Pro Val Asn Ser Ile Thr Phe Ser Ser Thr Asp Pro Gln Asp Arg
 1330 1335 1340
 Arg Trp Thr Asn Pro Asp Gly Thr Thr Ser Lys Ile Phe Gly Phe Val
 1345 1350 1355 1360
 Ala Lys Lys Pro Gly Ser Pro Trp Glu Asn Val Cys His Leu Phe Ala
 1365 1370 1375
 Glu Leu Asp Pro Asp Gln Pro Ala Gly Ala Ile Val Thr Phe Ile Thr
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 Lys Val Leu Leu Gly Gln Arg Lys
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<210> 805

<211> 550

<212> DNA

<213> Homo sapiens

<400> 805

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 240
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 300
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 360
 aatggacctt gccaggacac tcagtcacag gtttcacacc caaagagaag acagcccaac
 420
 ccagaccctc aaaagagagc acctggggga agggagcgtg gaaaccagga ctcagaaaga
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cacaagagaa aaagaagctg tacactgggg aggcttccgg ggtacctgtg cctgccatgt
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 550

<210> 806
 <211> 118
 <212> PRT
 <213> Homo sapiens

<400> 806
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 Ser Leu Ser Ile His Ser Trp Leu Thr Phe Leu Ala Gln Gly Val Ser
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 Met Ala Leu Phe Pro Ser Ser Gly His Gln Phe Arg Ser Arg Gly Pro
 35 40 45
 Met Leu Gly Arg Ala Thr Pro Met Asp Leu Ala Arg Thr Leu Ser His
 50 55 60
 Arg Phe His Thr Gln Arg Glu Asp Ser Pro Thr Gln Thr Leu Lys Arg
 65 70 75 80
 Glu His Leu Gly Glu Gly Ser Val Glu Thr Arg Thr Gln Lys Asp Thr
 85 90 95
 Arg Glu Lys Glu Ala Val His Trp Gly Gly Phe Arg Gly Thr Cys Ala
 100 105 110
 Cys His Val Ser Glu Gly
 115

<210> 807
 <211> 287
 <212> DNA
 <213> Homo sapiens

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 120
 ccgagtgggt cgaagctcag accgggacag gccgctatac cagcgcgagc gattatatct
 180
 gcgccctgat tcgccaggac caggagcgaa gcgacggcct caggcagctt caaacgttga
 240
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 287

<210> 808
 <211> 93
 <212> PRT
 <213> Homo sapiens

<400> 808
 Met Ala Val Ala Leu Pro His Trp Gln Asp Ala Lys Phe Leu Ala Met
 1 5 10 15
 Ile Ser Arg Gly Gly Arg Ala Arg Gly Met Ala Thr Val Asn Val Ser

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      20      25      30
Leu Ser Asp Ala Met Thr Glu Trp Val Glu Ala Gln Thr Gly Thr Gly
      35      40      45
Arg Tyr Thr Ser Ala Ser Asp Tyr Ile Cys Ala Leu Ile Arg Gln Asp
      50      55      60
Gln Glu Arg Ser Asp Gly Leu Arg Gln Leu Gln Thr Leu Ile Thr Glu
      65      70      75      80
Gly Phe Asp Ser Gly Ile Ser Ala Ser Ser Leu Asp Asp
      85      90

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<210> 809
 <211> 405
 <212> DNA
 <213> Homo sapiens

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<400> 809
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120
gacgcgtggt cgcgtaaat ggagagacga tcggtgccgc ccttgcccca cgatcctgat
180
ggccccgaga ttctgacga tgtcaccacc ctgcaccaac aggtaatggg tctgccacgt
240
cacctgggta tccactcagc tggaatggtg ctgacgcgag aaccagtagg acgcatctgc
300
cccattgagc cggctcgaat gtttggtcgc acggggctgc agtgggacaa anaaaactgt
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405

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<210> 810
 <211> 135
 <212> PRT
 <213> Homo sapiens

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<400> 810
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Gly Gly Gly Gly Gly Pro Pro Pro Pro Pro Pro Leu Phe Phe Pro Arg
      20      25      30
Gly Val Tyr Ser Gln Gly Gln Gln Asp Ala Trp Ser Arg Gln Met Glu
      35      40      45
Arg Arg Ser Val Pro Pro Leu Pro His Asp Pro Asp Gly Pro Glu Ile
      50      55      60
Pro Asp Asp Val Thr Thr Leu Ala Gln Gln Val Met Gly Leu Pro Arg
      65      70      75      80
His Leu Gly Ile His Ser Ala Gly Met Val Leu Thr Arg Glu Pro Val
      85      90      95
Gly Arg Ile Cys Pro Ile Glu Pro Ala Arg Met Phe Gly Arg Thr Gly
      100      105      110
Leu Gln Trp Asp Lys Xaa Asn Cys Ala Trp Met Gly Leu Gly Lys Phe
      115      120      125
Asp Leu Leu Gly Leu Gly Met

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130

135

<210> 811
 <211> 642
 <212> DNA
 <213> Homo sapiens

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 120
 tggtgacaca ttaacaacac ccgggaagca gtactgcaa cacctagata tgagaaaaag
 180
 aaaacaggca cttaaagcga ggctaaccga ctttcaggaa tgataaaggg cagaggaccc
 240
 tgtcacctct acccctgcta ctaaaggcgt ggccacaga gcagcagcac cagcagcaca
 300
 taaaatgggg ttaaatatga caggaaaaac aaggtgacag ggaaatgggg tgaagatcaa
 360
 gttcgtggta ngtctttctt tcctagaggc tttgggcctg agctcttggg gaaagctctc
 420
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 480
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 540
 tctttccctt aattctataa gacagtacct ctggcttaga aattatatgc cctcctttaa
 600
 aaaaacgaâa tgctagagga catagaactt gaggaâââââ tt
 642

<210> 812
 <211> 106
 <212> PRT
 <213> Homo sapiens

<400> 812
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 20 25 30
 Ala His Pro Glu Val Leu Glu Ser Phe Leu Gln Glu Leu Arg Pro Lys
 35 40 45
 Ala Ser Arg Lys Glu Arg Xaa Thr Thr Asn Leu Ile Phe Thr Pro Phe
 50 55 60
 Pro Cys His Leu Val Phe Pro Val Ile Phe Asn Pro Ile Leu Cys Ala
 65 70 75 80
 Ala Gly Ala Ala Ala Leu Trp Ala Thr Pro Leu Val Ala Gly Val Glu
 85 90 95
 Val Thr Gly Ser Ser Ala Leu Tyr His Ser
 100 105

<210> 813
 <211> 558

<212> DNA

<213> Homo sapiens

<400> 813

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120
gttcgctgac cagcaccggg ccgcccggct gggccgggaa accgtggaac aaggggaagcg
180
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240
tcggggtcga ggatgatccg cggcccttcg atcttgacca cgatctccag ttgcccccca
300
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420
ttgaattgcg tgcgcttatt gtccgcaacc agcccctcgt tcgcggtttt cgcttcgcgc
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558

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<210> 814

<211> 151

<212> PRT

<213> Homo sapiens

<400> 814

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Met Thr Phe Ser Ala Gly Ser Leu Thr Ser Thr Gly Pro Pro Gly Trp
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      20             25             30
Ala Phe Gly Pro Leu Ala Phe Gly Gln Arg Ala Ala Gln Phe Gly Val
      35             40             45
Glu Asp Asp Pro Arg Pro Phe Asp Leu Asp His Asp Leu Gln Leu Pro
      50             55             60
Ala Ile Val Phe Ala Ala Asp Ile Gln Arg Ala Ala Ala His Gln Arg
      65             70             75             80
Leu Ala Gly Asp Gln Gly Glu Val Gln His His Leu Gln Arg Gly Leu
      85             90             95
Gly Gln Arg Leu Arg Phe His Pro Pro Val Glu Leu Arg Ala Leu Ile
      100            105            110
Val Gly Asn Gln Pro Leu Val Arg Gly Phe Arg Phe Ala Arg Val Asp
      115            120            125
Leu Phe Ala Glu Pro Ala Gly Gly Ala Glu Gly Glu Ala Glu Glu Phe
      130            135            140
Glu Leu Val Gly Gly Tyr Ala
      145            150

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<210> 815

<211> 315

<212> DNA

<213> Homo sapiens

<400> 815

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120
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180
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315
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<210> 816

<211> 90

<212> PRT

<213> Homo sapiens

<400> 816

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Met Pro Ser Asp Leu Pro Lys Val Asp Asp Glu Lys Ala His Asp Ala
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Pro His Thr Asp Gly Ser Glu Pro Gly Gln Ala Ser Ala Gly Glu Ser
20          25          30
Arg Asp Leu Thr Ser Glu Ala Asp Ser Ala Ser Ala Gln Pro Ser Thr
35          40          45
His Ala Glu Val Ser Ser Glu Val Thr Ala Thr Ser Ser Ile Asp Glu
50          55          60
Gln Val Asp Leu Ile Ala Ala Pro Leu Ser Glu Glu Ser Asn Val Ser
65          70          75          80
Lys Leu Gly Pro Ser Pro Glu Ala Asp Thr
85          90
```

<210> 817

<211> 321

<212> DNA

<213> Homo sapiens

<400> 817

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120
aatacacttt tctcaaagct tcaaattaat caatccatta tattctgcaa ctctgttaat
180
agtgttgagc tgctggctaa aaaaataact gaactcgggt attcatgctt ctacattcat
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300
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321
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<210> 818
 <211> 107
 <212> PRT
 <213> Homo sapiens

<400> 818
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 Asp Glu Leu Thr Leu Lys Gly Ile Thr Gln Tyr Tyr Ala Phe Val Glu
 20 25 30
 Glu Gly Gln Lys Val His Cys Leu Asn Thr Leu Phe Ser Lys Leu Gln
 35 40 45
 Ile Asn Gln Ser Ile Ile Phe Cys Asn Ser Val Asn Ser Val Glu Leu
 50 55 60
 Leu Ala Lys Lys Ile Thr Glu Leu Gly Tyr Ser Cys Phe Tyr Ile His
 65 70 75 80
 Ala Lys Met Leu Gln Asp His Arg Asn Arg Val Phe His Asp Cys Arg
 85 90 95
 Asn Gly Ala Cys Arg Asn Leu Val Cys Thr Asp
 100 105

<210> 819
 <211> 3422
 <212> DNA
 <213> Homo sapiens

<400> 819
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<210> 820

<211> 494

<212> PRT

<213> Homo sapiens

<400> 820

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			20					25					30		
Lys	Lys	Arg	Ser	Arg	Lys	Gly	Arg	Ala	Gly	Ala	His	Gly	Leu	Ser	Lys
		35					40					45			
Gly	Pro	Leu	Glu	Lys	Arg	Pro	Tyr	Leu	Gly	Pro	Ala	Leu	Pro	Leu	Thr
		50				55					60				
Pro	Arg	Asp	Arg	Ala	Ser	Gly	Thr	Gln	Gly	Ala	Ser	Glu	Asp	Asn	Ser
65					70					75				80	
Gly	Gly	Gly	Gly	Lys	Lys	Pro	Lys	Met	Glu	Glu	Leu	Gly	Leu	Ala	Ser


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<210> 821
<211> 420
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<212> DNA

<213> Homo sapiens

<400> 821

acgcgtcccc tcacctgcgg tatggaccaa gtgagttgtg tgctcgacaa tgggttcgcc
60
gccatcatgg atgtgccggg tttcaactat cgcgcccatc gttacaccga agcctatcgg
120
cgtttgccgc aaaatgtggt gctaggttcg gaaacgacct cgacggtgag cagccgtggt
180
gtctacaagt ttcctgttgt gctgaagtcc gatgccatct atcccgacca tcagtcgtca
240
ggctacgaca cagagtattg ttcgtggtcg aacacccccg atgtcgattt cgccctcgcc
300
gaagactatc cctggacgat ggggcagttt gtctggacgg gcttcgacta cctcggtgaa
360
ccttcgcctt acgacaccga tgctggccc tctcacgcct ccctcttcgg cattgtcgac
420

<210> 822

<211> 133

<212> PRT

<213> Homo sapiens

<400> 822

Met Asp Gln Val Ser Cys Val Leu Asp Asn Gly Phe Ala Ala Ile Met
1 5 10 15
Asp Val Pro Gly Phe Asn Tyr Arg Ala His Arg Tyr Thr Glu Ala Tyr
20 25 30
Arg Arg Leu Pro Gln Asn Val Val Leu Gly Ser Glu Thr Thr Ser Thr
35 40 45
Val Ser Ser Arg Gly Val Tyr Lys Phe Pro Val Val Leu Lys Ser Asp
50 55 60
Ala Ile Tyr Pro Asp His Gln Ser Ser Gly Tyr Asp Thr Glu Tyr Cys
65 70 75 80
Ser Trp Ser Asn Thr Pro Asp Val Asp Phe Ala Leu Ala Glu Asp Tyr
85 90 95
Pro Trp Thr Met Gly Gln Phe Val Trp Thr Gly Phe Asp Tyr Leu Gly
100 105 110
Glu Pro Ser Pro Tyr Asp Thr Asp Ala Trp Pro Ser His Ala Ser Leu
115 120 125
Phe Gly Ile Val Asp
130

<210> 823

<211> 550

<212> DNA

<213> Homo sapiens

<400> 823

tctagattct tgggcagccg agccctcttt gaattcctca gcctaccatc atgatcaaca
60
cctcccatgt tccgtccatg aatgaccgca ctgacagcac tggagagatt taatgggtca
120

ccaattgagg cagtgaaggc actcatggca ctcagagctg gaatggggct gatctgagtt
 180
 gtactgttga ctgcagtggg gatgacaacc tgcattcctt tgctggctgc atcgacaact
 240
 gctttgtaaa tggcatctac ggaagcatca cctggggccac ccacaacgag gccatccttc
 300
 acctgttgac caagagatgg gtcaatcctc gggtgcaact cacaaggtgt atcttgaaaa
 360
 ggtggaagtg tagtgtttgg attctcagga agtgctgtga gcccaggctg agtgcttatt
 420
 cttttgttta ggagagctgc atcttcctgc attctcacct gaaagttctg aaacagacaa
 480
 gccatggggg tattgttagc tgggcaagga attgtggact gtccttgga cgctggaga
 540
 ttctgggtacc
 550

<210> 824
 <211> 161
 <212> PRT
 <213> Homo sapiens

<400> 824
 Met Ala Cys Leu Phe Gln Asn Phe Gln Val Arg Met Gln Glu Asp Ala
 1 5 10 15
 Ala Leu Leu Asn Lys Arg Ile Ser Thr Gln Pro Gly Leu Thr Ala Leu
 20 25 30
 Pro Glu Asn Pro Asn Thr Thr Leu Pro Pro Phe Gln Asp Thr Pro Cys
 35 40 45
 Glu Leu Gln Pro Arg Ile Asp Pro Ser Leu Gly Gln Gln Val Lys Asp
 50 55 60
 Gly Leu Val Val Gly Gly Pro Gly Asp Ala Ser Val Asp Ala Ile Tyr
 65 70 75 80
 Lys Ala Val Val Asp Ala Ala Ser Lys Gly Met Gln Val Val Ile Thr
 85 90 95
 Thr Ala Val Asn Ser Thr Thr Gln Ile Ser Pro Ile Pro Ala Leu Ser
 100 105 110
 Ala Met Ser Ala Phe Thr Ala Ser Ile Gly Asp Pro Leu Asn Leu Ser
 115 120 125
 Ser Ala Val Ser Ala Val Ile His Gly Arg Asn Met Gly Gly Val Asp
 130 135 140
 His Asp Gly Arg Leu Arg Asn Ser Arg Gly Ala Arg Leu Pro Lys Asn
 145 150 155 160
 Leu

<210> 825
 <211> 327
 <212> DNA
 <213> Homo sapiens

<400> 825
 gcggtttgcga ccggccgtaa cccgcagaat gcggcggtgt gttgcactga gggatatttg
 60

cagttgctgg atgagcgcga gatgcgcggc gtgctcggcc acgagctgat gcacgtgtac
 120
 aaccgcgata tcttcacctc ttcggtggcg gcgggtatcg cctccatcat cggtacgatt
 180
 gcgcagattc tttcgtttgg cgcgatgttc ggtggatcca accgcgatgg tgaacgttcc
 240
 aacccccctcg ccatgttcgt ggttgctatg ctggctccca ttgctactca ggtcatccag
 300
 atggctatta gccgcacccg tgaattc
 327

<210> 826
 <211> 109
 <212> PRT
 <213> Homo sapiens

<400> 826
 Ala Phe Ala Thr Gly Arg Asn Pro Gln Asn Ala Ala Val Cys Cys Thr
 1 5 10 15
 Glu Gly Ile Leu Gln Leu Leu Asp Glu Arg Glu Met Arg Gly Val Leu
 20 25 30
 Gly His Glu Leu Met His Val Tyr Asn Arg Asp Ile Leu Thr Ser Ser
 35 40 45
 Val Ala Ala Gly Ile Ala Ser Ile Ile Gly Thr Ile Ala Gln Ile Leu
 50 55 60
 Ser Phe Gly Ala Met Phe Gly Gly Ser Asn Arg Asp Gly Glu Arg Ser
 65 70 75 80
 Asn Pro Leu Ala Met Phe Val Val Ala Met Leu Ala Pro Ile Ala Thr
 85 90 95
 Gln Val Ile Gln Met Ala Ile Ser Arg Thr Arg Glu Phe
 100 105

<210> 827
 <211> 534
 <212> DNA
 <213> Homo sapiens

<400> 827
 nacgcgtacg tcaatatgca tcgtccagtc gttatcgcaa cgccgaaatc gatgctgcgc
 60
 aacaagatgg cgacctcgga tcccgaagag ttcaccaccg gtaggtggcg tctgtttcta
 120
 cccgacccat cgatcaccga cccgacggcc gttacgagga ttatcttgtg ctctggcaag
 180
 gcgcggtggg agctggtcaa gcaacgtaag gccgccagtc ttgacggaca gctcggccatc
 240
 atcccgatgg agcgtctcta cccgctacca gtcgacgagt tggctgaggt ttttgcgcct
 300
 tacaccaacg tcacggatgt ccgctgggtc caagaagagc cagagaacca gggcgccctgg
 360
 tactacatgc tgaccacact gccccaggcc atgtcggaga agctgccagg attctttgat
 420
 gggtagtgcg gcacacccg cccaccgtcc tcagctccgt cggtgggaca gcacagcgtc
 480

cacatccgtg aagagcagga gttactcgag aaggctatag cctgagcgac ctga
534

<210> 828

<211> 174

<212> PRT

<213> Homo sapiens

<400> 828

Xaa	Ala	Tyr	Val	Asn	Met	His	Arg	Pro	Val	Val	Ile	Ala	Thr	Pro	Lys
1				5				10						15	
Ser	Met	Leu	Arg	Asn	Lys	Met	Ala	Thr	Ser	Asp	Pro	Glu	Glu	Phe	Thr
		20						25					30		
Thr	Gly	Arg	Trp	Arg	Pro	Val	Leu	Pro	Asp	Pro	Ser	Ile	Thr	Asp	Pro
	35						40					45			
Thr	Ala	Val	Thr	Arg	Ile	Ile	Leu	Cys	Ser	Gly	Lys	Ala	Arg	Trp	Glu
	50				55						60				
Leu	Val	Lys	Gln	Arg	Lys	Ala	Ala	Ser	Leu	Asp	Gly	Gln	Leu	Ala	Ile
65				70						75				80	
Ile	Pro	Met	Glu	Arg	Leu	Tyr	Pro	Leu	Pro	Val	Asp	Glu	Leu	Ala	Glu
			85						90				95		
Val	Phe	Ala	Pro	Tyr	Thr	Asn	Val	Thr	Asp	Val	Arg	Trp	Val	Gln	Glu
		100						105					110		
Glu	Pro	Glu	Asn	Gln	Gly	Ala	Trp	Tyr	Tyr	Met	Leu	Thr	His	Leu	Pro
	115						120					125			
Gln	Ala	Met	Ser	Glu	Lys	Leu	Pro	Gly	Phe	Phe	Asp	Gly	Leu	Val	Gly
	130					135					140				
Ile	Thr	Arg	Pro	Pro	Ser	Ser	Ala	Pro	Ser	Val	Gly	Gln	His	Ser	Val
145					150					155				160	
His	Ile	Arg	Glu	Glu	Gln	Glu	Leu	Leu	Glu	Lys	Ala	Ile	Ala		
				165						170					

<210> 829

<211> 492

<212> DNA

<213> Homo sapiens

<400> 829

nagtggccgg gtggccggcg ggtgccagcc gccatggagg ccgtgccccg catgccccatg
60
atctggctgg acctgaagga ggccgggtgac tttcacttcc agccagctgt gaagaagttt
120
gtcctgaaga attatggaga gaaccagaa gcctacaatg aagaactgaa gaagctggag
180
ttgctcagac agaatgctgt ccgtgtccca cgagactttg agggctgtag tgtcctccgc
240
aagtacctcg gccagcttca ttacctgcag agtcgggtcc ccatgggctc gggccaggag
300
gccgtgtcc ctgtcacatg gacagagatc ttctcaggca agtctgtggc ccatgaggac
360
atcaagtacg agcaggcctg tattttctcc aacnttgag cgctgcactc catgctgggg
420
gccatggaca agcgggtgtc tgaggagggc atgaaggtct cctgtacca tttccagtgc
480

gcagccggcg cc
492

<210> 830
<211> 164
<212> PRT
<213> Homo sapiens

<400> 830
Xaa Trp Pro Gly Gly Arg Arg Val Pro Ala Ala Met Glu Ala Val Pro
1 5 10 15
Arg Met Pro Met Ile Trp Leu Asp Leu Lys Glu Ala Gly Asp Phe His
20 25 30
Phe Gln Pro Ala Val Lys Lys Phe Val Leu Lys Asn Tyr Gly Glu Asn
35 40 45
Pro Glu Ala Tyr Asn Glu Glu Leu Lys Lys Leu Glu Leu Leu Arg Gln
50 55 60
Asn Ala Val Arg Val Pro Arg Asp Phe Glu Gly Cys Ser Val Leu Arg
65 70 75 80
Lys Tyr Leu Gly Gln Leu His Tyr Leu Gln Ser Arg Val Pro Met Gly
85 90 95
Ser Gly Gln Glu Ala Ala Val Pro Val Thr Trp Thr Glu Ile Phe Ser
100 105 110
Gly Lys Ser Val Ala His Glu Asp Ile Lys Tyr Glu Gln Ala Cys Ile
115 120 125
Phe Ser Asn Xaa Gly Ala Leu His Ser Met Leu Gly Ala Met Asp Lys
130 135 140
Arg Val Ser Glu Glu Gly Met Lys Val Ser Cys Thr His Phe Gln Cys
145 150 155 160
Ala Ala Gly Ala

<210> 831
<211> 303
<212> DNA
<213> Homo sapiens

<400> 831
gcgttgctgc ggcgtggcga gaccatgacg gcggagaatc agcgtgccaa tgtgcgcac
60
gccgcaaacc acatcaagga ggttgcggtc gatcacgagg tcgttgtagc ccattggaat
120
ggccccagg taggtctgtt ggctctgcaa tcgacagcct acgaggaagt cggtatctat
180
ccgctggatg tcctgggcgc agagtcacag gccatgatcg gctacatgat cgagcaggaa
240
ctcggcaatg tgatgcctca ggatcagcag atcgtcacca tgatcacgat gacagtcgtc
300
gac
303

<210> 832
<211> 101
<212> PRT

<213> Homo sapiens

<400> 832

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Ala Leu Leu Arg Arg Gly Glu Thr Met Thr Ala Glu Asn Gln Arg Ala
 1           5           10           15
Asn Val Arg Ile Ala Ala Asn His Ile Lys Glu Val Ala Val Asp His
      20           25           30
Glu Val Val Val Ala His Gly Asn Gly Pro Gln Val Gly Leu Leu Ala
      35           40           45
Leu Gln Ser Thr Ala Tyr Glu Glu Val Gly Ile Tyr Pro Leu Asp Val
      50           55           60
Leu Gly Ala Glu Ser Gln Ala Met Ile Gly Tyr Met Ile Glu Gln Glu
65           70           75           80
Leu Gly Asn Val Met Pro Gln Asp Gln Gln Ile Val Thr Met Ile Thr
      85           90           95
Met Thr Val Val Asp
      100

```

<210> 833

<211> 466

<212> DNA

<213> Homo sapiens

<400> 833

```

nngatccgcg cgatcgacga ggcgggtgcg tgatgttgac agcgaaaatg cgcagccggc
60
catttgacga gggctgaaaa cgtcttctac cggctctgctg tgccgcctgg tgtcagcaaa
120
cgacgccatg atcgtccagt gggatcgcg ttgttctgctg gcgctggggg attcagttgc
180
ggattccacc aggcgggtg gcatgttgcg gcggcggttg agcacgacgt gtcggcgctct
240
ctgacctatg tcatgaatct cgctcgcccc ggcgtcaaga ttcacatcga ccccgagcac
300
ccggagctgg gcccaagacc accgcgaacc aagaagaaga gcggcggcgc agtgccgttc
360
gatgcgcgctg tcggaactgg gtggatcgcc agcgagcccc cgcacgatcc cggctgcgaa
420
cacttctacg tgtacgacgt caagaacctc agcggcgagc ggatcc
466

```

<210> 834

<211> 142

<212> PRT

<213> Homo sapiens

<400> 834

```

Gln Arg Lys Cys Ala Ala Gly His Leu Thr Arg Ala Glu Asn Val Phe
 1           5           10           15
Tyr Arg Ser Ala Val Pro Pro Gly Val Ser Lys Arg Arg His Asp Arg
      20           25           30
Pro Val Gly Ile Asp Leu Phe Cys Gly Ala Gly Gly Phe Ser Cys Gly
      35           40           45
Phe His Gln Ala Gly Trp His Val Ala Ala Ala Val Glu His Asp Val

```

```

      50              55              60
Ser Ala Ser Leu Thr Tyr Val Met Asn Leu Ala Arg Pro Gly Val Lys
65              70              75              80
Ile His Ile Asp Pro Glu His Pro Glu Leu Gly Pro Arg Pro Pro Arg
      85              90              95
Thr Lys Lys Lys Ser Gly Gly Ala Val Pro Phe Asp Ala His Val Gly
      100              105              110
Thr Gly Trp Ile Ala Ser Glu Pro Ala Asp Asp Pro Gly Cys Glu His
      115              120              125
Phe Tyr Val Tyr Asp Val Lys Asn Leu Ser Gly Glu Arg Ile
      130              135              140

```

<210> 835

<211> 482

<212> DNA

<213> Homo sapiens

<400> 835

```

acgcgtgaag ggattttgat caccagaac aaccacctgt ctttttagat caagaagcag
60
aagctcagag caaagaacat cacaccacgt ccctcagtga ttgaagcagt gattgagtca
120
cagaataaat ctggaactca ggtcttctga tctttgctcc agatgttaga gacaaaacta
180
aaagtaaaat accaagtga atcaaagcat cagattgag ccagaacat gaaaaagaac
240
ttcctggccc acttgagaaa ctgttaaacc ggacatacct ttggggactt cttcccttct
300
ctggaataag attgatgttt ccatgctgtg aaagacgatg atgttccttc tcccagattc
360
ctgctgtctt caaaaggcct agcaaaaacc actgctgctg ggtgcagttg agaaagggaa
420
tgaagaacaa tcccatggcc atgcaggcac tcctcccttc cacctctctg cccttcacgc
480
gt
482

```

<210> 836

<211> 120

<212> PRT

<213> Homo sapiens

<400> 836

```

Met Ala Met Gly Leu Phe Phe Ile Pro Phe Leu Asn Cys Thr Gln Gln
 1              5              10              15
Gln Trp Phe Leu Leu Gly Leu Leu Lys Thr Ala Gly Ile Trp Glu Lys
      20              25              30
Glu His His Arg Leu Ser Gln His Gly Asn Ile Asn Leu Ile Pro Glu
      35              40              45
Lys Gly Arg Ser Pro Gln Arg Tyr Val Arg Phe Asn Ser Phe Ser Ser
      50              55              60
Gly Pro Gly Ser Ser Phe Ser Cys Ser Gly Leu Asn Arg Asp Ala Leu
65              70              75              80
Ile Ser Leu Gly Ile Leu Leu Leu Val Leu Ser Leu Thr Ser Gly Ala

```


85 90 95
 Lys Ile Arg Arg Pro Glu Phe Gln Ile Tyr Ser Val Thr Gln Ser Leu
 100 105 110
 Leu Gln Ser Leu Arg Asp Val Val
 115 120

<210> 837
 <211> 509
 <212> DNA
 <213> Homo sapiens

<400> 837
 acgcgtggac ccccggttctg cccgcctttg cagtcacgc cctccctgaa gtcaccgctg
 60
 cagaaatacg caggcactga cctgggggta cagccaggca agggagagac gaggggctca
 120
 ctctgcacca gccaaaggcct gtgtcctggc atggctcccc caggaagcga ggatggcggt
 180
 gcctggcggt cgagccccctc ttatcctggg gaatgctggg gggcgcttct gagcagacct
 240
 gcctgctgcc cctgctggct ggcactgccc ctccccggg gaaaggttgg gtggtcccc
 300
 caggggaact caaagcaggg gagccccctg aggccccaag tccctggaat atcttggcgc
 360
 tcagatggcc cccctcgaac accctcacac gggggggccg cgcggtggga ggtgaccag
 420
 cagccactct tacttggcga agacttttct cccaatgcga gcgcgggttg tatcagcctg
 480
 agccttcagg ttggtgaggc tggggtacc
 509

<210> 838
 <211> 119
 <212> PRT
 <213> Homo sapiens

<400> 838
 Met Ala Pro Pro Gly Ser Glu Asp Gly Gly Ala Trp Arg Ser Ser Pro
 1 5 10 15
 Ser Tyr Pro Gly Glu Cys Trp Gly Ala Phe Leu Ser Arg Pro Ala Cys
 20 25 30
 Cys Pro Cys Trp Leu Ala Leu Pro Leu Pro Arg Gly Lys Val Gly Trp
 35 40 45
 Ser Pro Gln Gly Asn Ser Lys Gln Gly Ser Pro Trp Arg Pro Gln Val
 50 55 60
 Pro Gly Ile Ser Trp Arg Ser Asp Gly Pro Pro Arg Thr Pro Ser His
 65 70 75 80
 Gly Gly Ala Ala Arg Trp Glu Val Thr Gln Gln Pro Leu Leu Leu Gly
 85 90 95
 Glu Asp Phe Ser Pro Asn Ala Ser Ala Gly Gly Ile Ser Leu Ser Leu
 100 105 110
 Gln Val Gly Glu Ala Gly Val
 115

<210> 839
 <211> 347
 <212> DNA
 <213> Homo sapiens

<400> 839
 acgcgtctcg tggtcgtgcg gcacggcagg acggcggttca atgtggaggg tcggctccag
 60
 ggccgtctcg acatgccgtt ggatgaggtg gggcgccgtc aggcactcac agtgggtcaa
 120
 gtcacgcgcg agatggaacc tgacgcgatc atggcctctc cgctacaacg tgcgcgcgac
 180
 acagctcagg caatcggtgc ttgtgctgga ttgggcgtac agctggatga tcgactcatc
 240
 gagatcgatg tcggacgttg gtcgggacaa cgggctgcgg acctgcgtcg caacgaccc
 300
 gagtacgcag caagtgtggt cagccctatc gattaccggg tcggagn
 347

<210> 840
 <211> 115
 <212> PRT
 <213> Homo sapiens

<400> 840
 Thr Arg Leu Val Phe Val Arg His Gly Arg Thr Ala Phe Asn Val Glu
 1 5 10 15
 Gly Arg Leu Gln Gly Arg Leu Asp Met Pro Leu Asp Glu Val Gly Arg
 20 25 30
 Arg Gln Ala Leu Thr Val Ala Gln Val Ile Ala Glu Met Glu Pro Asp
 35 40 45
 Ala Ile Met Ala Ser Pro Leu Gln Arg Ala Arg Asp Thr Ala Gln Ala
 50 55 60
 Ile Gly Ala Cys Ala Gly Leu Gly Val Gln Leu Asp Asp Arg Leu Ile
 65 70 75 80
 Glu Ile Asp Val Gly Arg Trp Ser Gly Gln Arg Ala Ala Asp Leu Arg
 85 90 95
 Arg Asn Asp Pro Glu Tyr Ala Ala Ser Val Val Ser Pro Ile Asp Tyr
 100 105 110
 Arg Val Gly
 115

<210> 841
 <211> 351
 <212> DNA
 <213> Homo sapiens

<400> 841
 tccggaactc accccgacgc cgtcattatg gacgtcatga tgccgcgtct agatggcttg
 60
 gaagccaccc ggatgctgcg cagcaatggc aacgacgtcc cgatcctcgt cctcaccgcc
 120
 cgcgatgctg tcgacgatcg cggtgacggc ctcgacgctg gcgccgatga ctacatggtc
 180

aagcccttcg ccctcgacga actcctcgct cgcctacgcg ccctcactcg tcgttcccgt
 240
 cccgagccag agcaaaacga ggccctgaa caactctcct tcgtgacct cacccttgat
 300
 ccaggcaccg gcgagatcac ccgcgggaac cgtcgcatca gtttgacgcg t
 351

<210> 842
 <211> 117
 <212> PRT
 <213> Homo sapiens

<400> 842
 Ser Gly Thr His Pro Asp Ala Val Ile Met Asp Val Met Met Pro Arg
 1 5 10 15
 Leu Asp Gly Leu Glu Ala Thr Arg Met Leu Arg Ser Asn Gly Asn Asp
 20 25 30
 Val Pro Ile Leu Val Leu Thr Ala Arg Asp Ala Val Asp Asp Arg Val
 35 40 45
 Asp Gly Leu Asp Ala Gly Ala Asp Asp Tyr Met Val Lys Pro Phe Ala
 50 55 60
 Leu Asp Glu Leu Leu Ala Arg Leu Arg Ala Leu Thr Arg Arg Ser Arg
 65 70 75 80
 Pro Glu Pro Glu Gln Asn Glu Ala Pro Glu Gln Leu Ser Phe Ala Asp
 85 90 95
 Leu Thr Leu Asp Pro Gly Thr Arg Glu Ile Thr Arg Gly Asn Arg Arg
 100 105 110
 Ile Ser Leu Thr Arg
 115

<210> 843
 <211> 393
 <212> DNA
 <213> Homo sapiens

<400> 843
 ctagccagg ctctcgacca cgaggggctg cgcgctgtgg cctctggggc aaaccgggtc
 60
 ggctcaagc gcggtatcga gaaggctgtc gacgccgttg tggaggagct ccgctctatc
 120
 tcgcgcgcca tcgacaccac ctcgacatg gccagcggtg ccaccatctc cagccgtgac
 180
 gagaccatcg gcgccctcat cgctgaggcc ttcgacaagg ttggttaagga cgggggttatc
 240
 accgtcgacg agtcgcagac ctctggcact gagcttgact tcaccgaggg catgcagttc
 300
 gacaagggtt acctgtcgcc ctacatggtc accgaccagg ttcgcatgga ggctgtgatc
 360
 gaggatcctt acatcctcat tcaactccgc aag
 393

<210> 844
 <211> 131
 <212> PRT

<213> Homo sapiens

<400> 844

```

Leu Ala Gln Ala Leu Val His Glu Gly Leu Arg Ala Val Ala Ser Gly
 1           5           10           15
Ala Asn Pro Val Gly Leu Lys Arg Gly Ile Glu Lys Ala Val Asp Ala
      20           25           30
Val Val Glu Glu Leu Arg Ser Ile Ser Arg Ala Ile Asp Thr Thr Ser
      35           40           45
Asp Met Ala Ser Val Ala Thr Ile Ser Ser Arg Asp Glu Thr Ile Gly
      50           55           60
Ala Leu Ile Ala Glu Ala Phe Asp Lys Val Gly Lys Asp Gly Val Ile
65           70           75           80
Thr Val Asp Glu Ser Gln Thr Phe Gly Thr Glu Leu Asp Phe Thr Glu
      85           90           95
Gly Met Gln Phe Asp Lys Gly Tyr Leu Ser Pro Tyr Met Val Thr Asp
      100          105          110
Gln Val Arg Met Glu Ala Val Ile Glu Asp Pro Tyr Ile Leu Ile His
      115          120          125
Ser Arg Lys
      130

```

<210> 845

<211> 505

<212> DNA

<213> Homo sapiens

<400> 845

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gccacctgcc caaggctgga tgacgggcct agggcacatc taaggaaaca ggacaggaca
60
gaagcaaagc cacagctgct ggggcagggt gggggccggt atgtctggcc agcagcatca
120
cccctgcccc cggcgaggct ccaggaccgg gagactcatc agccggaagc tcttgaggga
180
ggcggctgcc gtgaagacag gcacccttgc tctgagagg ggcaccaga gaaccaagac
240
tcagcagagg gaacacaggg ctacgccag gccccaggcc tgatatccag agtctaaatc
300
ccacctcagc ccagggggga gccttgagag gagctatgtc cctcatggac ccagtttcc
360
tctgcatacg ggctccgagc cctgcactgc ctccagggtg gttcccaagg tcttttccca
420
ttacctccta cgtgagcact cagtaaacca atacacatac acaagggtga cattaattcc
480
agccacagaa tcccaggcca cgcgt
505

```

<210> 846

<211> 130

<212> PRT

<213> Homo sapiens

<400> 846

```

Met Gly Lys Asp Leu Gly Asn Tyr Pro Gly Gly Ser Ala Gly Leu Gly

```

```

      1             5             10             15
Ala Arg Met Gln Arg Lys Leu Gly Ser Met Arg Asp Ile Ala Pro Leu
      20             25             30
Lys Ala Pro Pro Trp Ala Glu Val Gly Phe Arg Leu Trp Ile Ser Gly
      35             40             45
Leu Gly Pro Gly Arg Ser Pro Val Phe Pro Leu Leu Ser Leu Gly Ser
      50             55             60
Leu Gly Ala Pro Leu Arg Ser Lys Gly Ala Cys Leu His Gly Ser Arg
      65             70             75             80
Leu Leu Gln Glu Leu Pro Ala Asp Glu Ser Pro Gly Pro Gly Ala Pro
      85             90             95
Pro Gly Ala Gly Val Met Leu Leu Ala Arg His Thr Gly Pro His Pro
      100            105            110
Ala Pro Ala Ala Val Ala Leu Leu Leu Ser Cys Pro Cys Ser Leu Asp
      115            120            125
Val Pro
      130

```

<210> 847

<211> 448

<212> DNA

<213> Homo sapiens

<400> 847

```

aagcttttaa aggagcaaga aaacatgaaa gagctagtag tcaaccttct ccgcatgact
60
caaatcaaaa ttgatgaaaa ggaacaaaag tccaaggatt tcctgaaagc tcagcaaaaa
120
tacaccaaca ttgttaaaga aatgaaagca aaggatcttg aaatcaggat acacaagaag
180
aaaaaatgtg aaatttatcg gagactgaga gagcttgcta aactgtatga caccattcga
240
aatgaaagaa acaaatttgt taacttactc cacaaagctc atcagaaagt aaatgaaata
300
aaagaaaggc ataaaatgtc attaaatgaa cttgaaattc tgagaaatag tgccgttagt
360
caagaaagaa agctacaaaa ttccatgctg aaacacgcca acaatgttac catcagagag
420
agcatgcaaa acgatgtgcg caaaattt
448

```

<210> 848

<211> 149

<212> PRT

<213> Homo sapiens

<400> 848

```

Lys Leu Leu Lys Glu Gln Glu Asn Met Lys Glu Leu Val Val Asn Leu
      1             5             10             15
Leu Arg Met Thr Gln Ile Lys Ile Asp Glu Lys Glu Gln Lys Ser Lys
      20             25             30
Asp Phe Leu Lys Ala Gln Gln Lys Tyr Thr Asn Ile Val Lys Glu Met
      35             40             45
Lys Ala Lys Asp Leu Glu Ile Arg Ile His Lys Lys Lys Lys Cys Glu

```

```

      50              55              60
Ile Tyr Arg Arg Leu Arg Glu Leu Ala Lys Leu Tyr Asp Thr Ile Arg
65              70              75              80
Asn Glu Arg Asn Lys Phe Val Asn Leu Leu His Lys Ala His Gln Lys
      85              90              95
Val Asn Glu Ile Lys Glu Arg His Lys Met Ser Leu Asn Glu Leu Glu
      100             105             110
Ile Leu Arg Asn Ser Ala Val Ser Gln Glu Arg Lys Leu Gln Asn Ser
      115             120             125
Met Leu Lys His Ala Asn Asn Val Thr Ile Arg Glu Ser Met Gln Asn
      130             135             140
Asp Val Arg Lys Ile
145

```

<210> 849

<211> 463

<212> DNA

<213> Homo sapiens

<400> 849

```

nnacgcgtga ttgttggggc caaggaatgc catgtggaga gtgcaggtga agtgataagt
60
cttttggaga tggggaatgc agccagacat acaggtacca ctcaaataaa tgagcactcc
120
agcagatcac atgcaatttt tacaatcagc atttgtcaag ttcataaaaa tatggaggca
180
gctgaagatg gatcatggta ttcccctcgg catattgtct caaagttcca ctttgtggat
240
ttggcaggat cagaaagagt aacccaaaacg gggaatactg gtgaacggtt caaagaatcc
300
attcaaatca atagtggatt gctggcttta ggaaatgtaa taagcgctct tggggaccca
360
cgcaggaaga gttcacatat tccatatagg gatgctaaaa ttaccgggct tctgaaagat
420
tctctgggag gcagtgtctaa gactgtcatg atcacatgtg tca
463

```

<210> 850

<211> 154

<212> PRT

<213> Homo sapiens

<400> 850

```

Xaa Arg Val Ile Val Gly Ala Lys Glu Cys His Val Glu Ser Ala Gly
 1              5              10              15
Glu Val Ile Ser Leu Leu Glu Met Gly Asn Ala Ala Arg His Thr Gly
      20              25              30
Thr Thr Gln Met Asn Glu His Ser Ser Arg Ser His Ala Ile Phe Thr
      35              40              45
Ile Ser Ile Cys Gln Val His Lys Asn Met Glu Ala Ala Glu Asp Gly
      50              55              60
Ser Trp Tyr Ser Pro Arg His Ile Val Ser Lys Phe His Phe Val Asp
65              70              75              80
Leu Ala Gly Ser Glu Arg Val Thr Lys Thr Gly Asn Thr Gly Glu Arg

```

```

      85              90              95
Phe Lys Glu Ser Ile Gln Ile Asn Ser Gly Leu Leu Ala Leu Gly Asn
      100              105              110
Val Ile Ser Ala Leu Gly Asp Pro Arg Arg Lys Ser Ser His Ile Pro
      115              120              125
Tyr Arg Asp Ala Lys Ile Thr Arg Leu Leu Lys Asp Ser Leu Gly Gly
      130              135              140
Ser Ala Lys Thr Val Met Ile Thr Cys Val
145              150

```

<210> 851
 <211> 372
 <212> DNA
 <213> Homo sapiens

```

<400> 851
aaatttcctg tttctgatcg acgaaataaa gtttagcgtg atgagtgagc tgcttatgca
60
gttcctccat tcgcttataa acagttttat ttctcatttc gaaaactctc gatgcagaat
120
aaaggctaga gtctggggac caagtccecca gtcctgttta cgcgacttcc ttgaccttgt
180
ttgttatgct gataaggtta ttcagcttga cgatttggtc gtggtctttc aaccgttttg
240
cagctgggtcg acgatattcc tggtaggaac tacgatagaa gaccagcatc ggaagaactt
300
tgtagatgct gaacaaacac ccaccgatca cttcagcctc gaagtaaggg ttatactgtc
360
taaccacgc gt
372

```

<210> 852
 <211> 110
 <212> PRT
 <213> Homo sapiens

```

<400> 852
Met Ser Glu Leu Leu Met Gln Phe Leu His Ser Leu Ile Asn Ser Phe
1      5      10      15
Ile Ser His Phe Glu Asn Ser Arg Cys Arg Ile Lys Ala Arg Val Trp
      20      25      30
Gly Pro Ser Pro Gln Leu Arg Leu Arg Asp Phe Leu Asp Leu Val Cys
      35      40      45
Tyr Ala Asp Lys Val Ile Gln Leu Asp Asp Leu Phe Val Val Phe Gln
      50      55      60
Pro Phe Cys Ser Trp Ser Thr Ile Phe Leu Val Gly Thr Thr Ile Glu
65      70      75      80
Asp Gln His Arg Lys Asn Phe Val Asp Ala Glu Gln Thr Pro Thr Asp
      85      90      95
His Phe Ser Leu Glu Val Arg Val Ile Leu Ser Asn Pro Arg
      100      105      110

```

<210> 853
 <211> 423

<212> DNA

<213> Homo sapiens

<400> 853

acgcgttcag aaacttatgg tgaaatggcc gaactagaaa acctagtcga cgaatattac
60
caagctatgg gcatggatgt gcgtcgagaa acctggctgc gcgagcagat actcaagaaa
120
gtccaagaaa cgcattttgtt agaagagctt gcaggcatag aatcagggtga tgatggcgca
180
gtggtggaag agagcgtatt agaaggcctc gatacctatt tatgtgagat aaaagaagca
240
cagattcgtc atggattgca tcgtcttggga gaattaccag aagacgataa attggccgat
300
accttggtcg ccttattgcy tttaccccggt ggcagtgaca ttaccagcaa gggaattttg
360
catgccttaa tggcagattt agagttagaa caagacgatt ttgaccaat gcaaagcacg
420
cgt
423

<210> 854

<211> 141

<212> PRT

<213> Homo sapiens

<400> 854

Thr	Arg	Ser	Glu	Thr	Tyr	Gly	Glu	Met	Ala	Glu	Leu	Glu	Asn	Leu	Val
1				5					10					15	
Asp	Glu	Tyr	Tyr	Gln	Ala	Met	Gly	Met	Asp	Val	Arg	Arg	Glu	Thr	Trp
			20					25					30		
Leu	Arg	Glu	Gln	Ile	Leu	Lys	Lys	Val	Gln	Glu	Thr	His	Leu	Leu	Glu
			35				40					45			
Glu	Leu	Ala	Gly	Ile	Glu	Ser	Gly	Asp	Asp	Gly	Ala	Val	Val	Glu	Glu
	50					55				60					
Ser	Val	Leu	Glu	Gly	Leu	Asp	Thr	Tyr	Leu	Cys	Glu	Ile	Lys	Glu	Ala
65				70					75					80	
Gln	Ile	Arg	His	Gly	Leu	His	Arg	Leu	Gly	Glu	Leu	Pro	Glu	Asp	Asp
			85					90					95		
Lys	Leu	Ala	Asp	Thr	Leu	Val	Ala	Leu	Leu	Arg	Leu	Pro	Arg	Gly	Ser
			100					105					110		
Asp	Ile	Thr	Ser	Lys	Gly	Ile	Leu	His	Ala	Leu	Met	Ala	Asp	Leu	Glu
		115				120						125			
Leu	Glu	Gln	Asp	Asp	Phe	Asp	Pro	Met	Gln	Ser	Thr	Arg			
	130					135					140				

<210> 855

<211> 338

<212> DNA

<213> Homo sapiens

<400> 855

acgcgtgaag ggggagctca aagtagatgg acctctgact agatggagct ctgagtaaga
60

tgaatgtctg tgcggatggt gctcacagca agatagtgtt tggagcgatt ggcacttcga
 120
 acaagatgga gcatggagca gatggagctc tgagcaagat ggagcgtgga gtagatagag
 180
 cttggagcaa gaaggagctc caagcaagat ggagcttgca gcaggtgctt ctcagtgtaa
 240
 gatggagctc agagaagatg atgctcagag taagattgag ctcggtgatt ggcactccaa
 300
 acattgctct gagcccattg gagnctctga gcagaaag
 338

<210> 856

<211> 93

<212> PRT

<213> Homo sapiens

<400> 856

Met	Asn	Val	Cys	Ala	Asp	Val	Ala	His	Ser	Lys	Ile	Val	Leu	Gly	Ala
1				5					10					15	
Ile	Gly	Thr	Ser	Asn	Lys	Met	Glu	His	Gly	Ala	Asp	Gly	Ala	Leu	Ser
			20					25					30		
Lys	Met	Glu	Arg	Gly	Val	Asp	Arg	Ala	Trp	Ser	Lys	Lys	Glu	Leu	Gln
		35				40					45				
Ala	Arg	Trp	Ser	Leu	Gln	Gln	Val	Leu	Leu	Ser	Val	Arg	Trp	Ser	Ser
	50					55				60					
Glu	Lys	Met	Met	Leu	Arg	Val	Arg	Leu	Ser	Ser	Val	Ile	Gly	Thr	Pro
65				70				75					80		
Asn	Ile	Ala	Leu	Ser	Pro	Leu	Glu	Xaa	Leu	Ser	Arg	Lys			
				85					90						

<210> 857

<211> 435

<212> DNA

<213> Homo sapiens

<400> 857

ccggacagtg ggccaccagt gtttgccccc agcaatcatg tcagtgaagc ccaacctcgg
 60
 gagacacccc ggcccctcat gcctcctacc aagcctttcc tagcacctga gaccaccagc
 120
 cctgggtgaca ggggtggagac ccctgtgagg gagagagccc caaccctgt ctcagcaagc
 180
 tctgaggtct cccctgagag ccaagaggac tcagagaccc cagcagagga ggacagtggc
 240
 tctgagcagc ctcccaacag cgtcctgcct gacaaactga aggtgagctg ggagaacccc
 300
 agcccccagg aggccctgc tgcagagagt gcagaaccgt cccaggcacc ctgttctgag
 360
 acttctgagg ctgccccag ggagggtggg aagcccccta cccccacc caagatctta
 420
 tcagagaaac tgaaa
 435

<210> 858

<211> 145
 <212> PRT
 <213> Homo sapiens

<400> 858
 Pro Asp Ser Gly Pro Pro Val Phe Ala Pro Ser Asn His Val Ser Glu
 1 5 10 15
 Ala Gln Pro Arg Glu Thr Pro Arg Pro Leu Met Pro Pro Thr Lys Pro
 20 25 30
 Phe Leu Ala Pro Glu Thr Thr Ser Pro Gly Asp Arg Val Glu Thr Pro
 35 40 45
 Val Gly Glu Arg Ala Pro Thr Pro Val Ser Ala Ser Ser Glu Val Ser
 50 55 60
 Pro Glu Ser Gln Glu Asp Ser Glu Thr Pro Ala Glu Glu Asp Ser Gly
 65 70 75 80
 Ser Glu Gln Pro Pro Asn Ser Val Leu Pro Asp Lys Leu Lys Val Ser
 85 90 95
 Trp Glu Asn Pro Ser Pro Gln Glu Ala Pro Ala Ala Glu Ser Ala Glu
 100 105 110
 Pro Ser Gln Ala Pro Cys Ser Glu Thr Ser Glu Ala Ala Pro Arg Glu
 115 120 125
 Gly Gly Lys Pro Pro Thr Pro Pro Lys Ile Leu Ser Glu Lys Leu
 130 135 140
 Lys
 145

<210> 859
 <211> 561
 <212> DNA
 <213> Homo sapiens

<400> 859
 nacgcgtggt gtggtaatcc ggtttctggt ggcgacggct gccaccctc gtggcaagac
 60
 atgccgttgc gtgccgatat gccatacgaa gcttggccta gtgcgaaaag ctgcgtggaa
 120
 ccctcgaaga ggcagggtcg gcaggttacc gtggtcgggtg tacgcatcgt ttcgacgatg
 180
 aaccccatc tgggagcaga tatgacgacg taccagtacc tcattgtcgg tggcgggatg
 240
 gccgctgatt ctgccgcccg cggatatccgc gacatcgaca agaaagggc gatcgccatc
 300
 ctacgcgtg acgtcgacgc cccgtatcct cggccagcgc tgagcaagaa gctgtggact
 360
 gaccctgagt tcacctggga ccaggtcgac cttgctactg tcgctgacac cggcgcggaa
 420
 ttgcggctcg gcactgaggt gtcagcatt gaccgtgacg gcaagaccgt cctgaccgt
 480
 tccggccagg tattcggtta ccagaagttg ctgctcgta ccggccttac cccgtcgcgc
 540
 attgacgacg acggcgatgc c
 561

<210> 860

<211> 187
 <212> PRT
 <213> Homo sapiens

<400> 860
 Xaa Ala Trp Cys Gly Asn Pro Val Ser Gly Gly Asp Gly Cys His Pro
 1 5 10 15
 Ser Trp Gln Asp Met Pro Leu Arg Ala Asp Met Pro Tyr Glu Ala Trp
 20 25 30
 Pro Ser Ala Lys Ser Ser Leu Glu Pro Ser Lys Arg Gln Gly Arg Gln
 35 40 45
 Val Thr Val Val Gly Val Arg Ile Val Ser Thr Met Asn Pro Ile Leu
 50 55 60
 Gly Ala Asp Met Thr Thr Tyr Gln Tyr Leu Ile Val Gly Gly Gly Met
 65 70 75 80
 Ala Ala Asp Ser Ala Ala Arg Gly Ile Arg Asp Ile Asp Lys Lys Gly
 85 90 95
 Ser Ile Ala Ile Leu Ser Ala Asp Val Asp Ala Pro Tyr Pro Arg Pro
 100 105 110
 Ala Leu Ser Lys Lys Leu Trp Thr Asp Pro Glu Phe Thr Trp Asp Gln
 115 120 125
 Val Asp Leu Ala Thr Val Ala Asp Thr Gly Ala Glu Leu Arg Leu Gly
 130 135 140
 Thr Glu Val Leu Ser Ile Asp Arg Asp Gly Lys Thr Val Leu Thr Ala
 145 150 155 160
 Ser Gly Gln Val Phe Gly Tyr Gln Lys Leu Leu Leu Val Thr Gly Leu
 165 170 175
 Thr Pro Ser Arg Ile Asp Asp Asp Gly Asp Ala
 180 185

<210> 861
 <211> 352
 <212> DNA
 <213> Homo sapiens

<400> 861
 ccatgggttt ctatgctctg aggtttcatc tgtggggaac agtattgact tacttataaa
 60
 gagataatgg tcatacccta tggtcactca ccatagtctg gcggtacatg gactttctcag
 120
 cccagtaag atctgtatcc acaggacact taaagtcacc ttacagaggg ctatcccagt
 180
 gectgaggcc tattagaggc gtctcttttc agccatcagt gttagaggcc atctgcatgg
 240
 gatcccagag cctgcctcgg gaatggcaga agctggctgg tgcttggcgt gggctttgccc
 300
 tgtttcactg ctttcaggga ggcctgccac aggggagaaa ctggggggggg ga
 352

<210> 862
 <211> 116
 <212> PRT
 <213> Homo sapiens

<400> 862

```

Met Gly Phe Tyr Ala Leu Arg Phe His Leu Trp Gly Thr Val Leu Thr
 1           5           10           15
Tyr Leu Gln Arg Asp Asn Gly His Thr Leu Trp Ser Leu Thr Ile Val
      20           25           30
Trp Arg Tyr Met Asp Phe Ser Ala Pro Val Arg Ser Val Ser Thr Gly
      35           40           45
His Leu Lys Ser Pro Tyr Arg Gly Leu Ser Gln Cys Leu Arg Pro Ile
      50           55           60
Arg Gly Val Ser Phe Gln Pro Ser Val Leu Glu Ala Ile Cys Met Gly
      65           70           75           80
Ser Gln Ser Leu Pro Arg Glu Trp Gln Lys Leu Ala Gly Ala Trp Arg
      85           90           95
Gly Leu Cys Leu Phe His Cys Phe Gln Gly Gly Leu Pro Gln Gly Arg
      100           105           110
Asn Trp Gly Gly
      115

```

<210> 863

<211> 327

<212> DNA

<213> Homo sapiens

<400> 863

```

tccggatcga cccggacgaa ttccacggtc cagccattga cttccaaatg ctctttgaca
60
tacgccgtga catgttcaat gtccaactta cgcattgtcca cccgctcacc ggtctcattg
120
agtttgagct gcgagtagac gttgcggttag ttctcgttga ccgactgctc atacgagatg
180
tgcagaagca tcggtttgcg gccatcctcg gacggcattg gcttggttga catggccgct
240
tggcggaaca tggtcagggt aaagcccgcac ttgaagttgt gcgacagggc agaaacacac
300
agcatttctg accggcgatg acccatn
327

```

<210> 864

<211> 108

<212> PRT

<213> Homo sapiens

<400> 864

```

Met Gly His Arg Arg Ser Glu Met Leu Cys Val Ser Ala Leu Ser His
 1           5           10           15
Asn Phe Lys Ser Gly Phe Thr Leu Asn Met Phe Arg Gln Ala Ala Met
      20           25           30
Tyr Asn Lys Pro Met Pro Ser Glu Asp Gly Arg Lys Pro Met Leu Leu
      35           40           45
His Ile Ser Tyr Glu Gln Ser Val Asn Glu Asn Tyr Arg Asn Val Tyr
      50           55           60
Ser Gln Leu Lys Leu Asn Glu Thr Gly Glu Arg Val Asp Met Arg Lys
      65           70           75           80
Leu Asp Ile Glu His Val Thr Ala Tyr Val Lys Glu His Leu Glu Val

```

85 90 95
 Asn Gly Trp Thr Val Glu Phe Val Arg Val Asp Pro
 100 105

<210> 865
 <211> 729
 <212> DNA
 <213> Homo sapiens

<400> 865
 acgcgtcatc ctcattcaag aggcccagga ggagcaccac cctccgcata ttgcgcgtgc
 60
 agctctcggt ctggtctctg agcatgccca cggcgtctctg cacacagctt ctcagcagcc
 120
 tgggtggtgtc caggatcgac acatcactgc ctccgagttc agagggtttcc tttcccacct
 180
 tctcagaact ttctgtttcc atggcctcct ctgccacctc tgccacctcc cctgatgtgc
 240
 tggcctccgt ctccatcgcc tctcatggc cgtcttccgc ccggtgttcc aagcccagct
 300
 caggcaagtc tccgggcgcg aacagctggc tgatggtgac atgctgcagc ctggtcacat
 360
 cagaaaccat gaggggtggat ctccggaggt catcgatgtg gacagactgc cacagccctc
 420
 cgtggaagcc cacataggct gttcctcttc ccacccggga cagttttgtg atgaaataga
 480
 cgaagatacg gtcctcattt tctcgtattt tgttgatttc atttataaca gaatacttag
 540
 ctgaggcaat gagctgggcg ctacggattc catcttcaaa atctgtctga aaaatgagga
 600
 ttttacattt ggctgtattc gttaaacagt ttcggacttc tttgaggaat gagtactcgg
 660
 tgtcaaactg ctgcagccac aggagtgtgg gtttcggagc cctgcctgtg acctctgatt
 720
 ctaaaattt
 729

<210> 866
 <211> 83
 <212> PRT
 <213> Homo sapiens

<400> 866
 Ala Cys Pro Arg Arg Ser Ala His Ser Phe Ser Ala Ala Trp Trp Cys
 1 5 10 15
 Pro Gly Ser Thr His His Cys Leu Arg Val Gln Arg Phe Pro Phe Pro
 20 25 30
 Pro Ser Gln Asn Phe Leu Phe Pro Trp Pro Pro Leu Pro Leu Pro
 35 40 45
 Pro Pro Leu Met Cys Trp Pro Pro Ser Pro Ser Pro Pro His Gly Arg
 50 55 60
 Leu Pro Pro Gly Val Pro Ser Pro Ala Gln Ala Ser Leu Arg Ala Arg
 65 70 75 80
 Thr Ala Gly

<210> 867
 <211> 640
 <212> DNA
 <213> Homo sapiens

<400> 867
 nntccggaac atcaagatcc aggcgcagaa gaccgtcaga agctgcactg gccacctcct
 60
 tcaggtggac tctcgttggt ggccggcgctc gctggccccc tcgcacccgg tcccggtgtca
 120
 catgctccag ggcgcagctc ttgtccacct ttacctcacc gaaagccttg tttttgcctc
 180
 ggtaaatccc ttcattgagg gctttgatcc aggattcctt ctctcccccg gtgggtgcct
 240
 ggaatttgat gtcgctgacc ttgttccctg gggatcgag caggataaag cgggtgttttc
 300
 gcttgaggag ggcacgaagg tccctggcact tctcatagct gccagctcc acagtctcca
 360
 cacacttctg atcatcctca ttctcataga ccagcagctg ggcttggcag aggagcagat
 420
 atcgggtcttt ccagaaaccc aggaggcccc cactgctctt cttgatccag ccagccttgt
 480
 ccaccatctg tgctccccga ggctttctcac cggttccctt cacaccctcc tctccatgg
 540
 cgagtcgcc gaggtccgc cgtcccgcca ctgcttcca gcgcgcgcg ggctctgcc
 600
 ccgcgtctac gcccgccag gggcgactc tccgcgttct
 640

<210> 868
 <211> 52
 <212> PRT
 <213> Homo sapiens

<400> 868
 Gly Gly His Glu Gly Pro Gly Thr Ser His Ser Cys Pro Ala Pro Gln
 1 5 10 15
 Ser Pro His Thr Ser Asp His Pro His Ser His Arg Pro Ala Ala Gly
 20 25 30
 Pro Gly Arg Gly Ala Asp Ile Gly Leu Ser Arg Asn Pro Gly Gly Pro
 35 40 45
 His Cys Ser Ser
 50

<210> 869
 <211> 321
 <212> DNA
 <213> Homo sapiens

<400> 869
 ngggtgatgc tgctcgcggc attgagcacc tttgtgctca gcgcgctgtt tatcgacaac
 60

ttcctgtcgc cgctgaatat gcgcgggctg ggcctggcga ttctgacggt gggcatcgct
 120
 gcgtgcacca tgctgttctg cctggcgctg gggcatttcg acttgctcgtt gggctcgggtg
 180
 atcgccctgtg ccggtgtggt cgcggggatt gtgattcgtg acaccgatag cgtggcactc
 240
 ggcgtgtccg ctgcgttggc catgggcctg gtagtggggc tgatcaacgg catcgtgatc
 300
 gccaaagctgc gcatcaacgc g
 321

<210> 870

<211> 107

<212> PRT

<213> Homo sapiens

<400> 870

Xaa	Val	Met	Leu	Leu	Ala	Ala	Leu	Ser	Ile	Phe	Val	Leu	Ser	Ala	Leu
1			5					10				15			
Phe	Ile	Asp	Asn	Phe	Leu	Ser	Pro	Leu	Asn	Met	Arg	Gly	Leu	Gly	Leu
		20					25					30			
Ala	Ile	Ser	Thr	Val	Gly	Ile	Ala	Ala	Cys	Thr	Met	Leu	Phe	Cys	Leu
		35				40					45				
Ala	Ser	Gly	His	Phe	Asp	Leu	Ser	Val	Gly	Ser	Val	Ile	Ala	Cys	Ala
	50				55				60						
Gly	Val	Val	Ala	Gly	Ile	Val	Ile	Arg	Asp	Thr	Asp	Ser	Val	Ala	Leu
65				70				75					80		
Gly	Val	Ser	Ala	Ala	Leu	Ala	Met	Gly	Leu	Val	Val	Gly	Leu	Ile	Asn
			85					90					95		
Gly	Ile	Val	Ile	Ala	Lys	Leu	Arg	Ile	Asn	Ala					
		100					105								

<210> 871

<211> 320

<212> DNA

<213> Homo sapiens

<400> 871

agatcttcag agtcctcgtc ttttaaattgg gggtaacagc agcaagtcct cagaggtgtc
 60
 ctgagcctca aaacacatcc tggtttgtaa cgtccgcagc ctcagcaggg gctaggcaca
 120
 gaacaagcat tcaggacctg gaaggtacca gcgacacctg gtccctccctt cccaggcaca
 180
 aggcagcccc tctccattca agctctgccc cagcccagca aagagagggg tctctagcca
 240
 ctgccccac cactaccaca atcatactca cctctcctgg tccatacgtg acaaaggacc
 300
 tgccacggcc agggagacaa
 320

<210> 872

<211> 98

<212> PRT

<213> Homo sapiens

<400> 872

Met Gly Val Thr Ala Ala Ser Pro Gln Arg Cys Pro Glu Pro Gln Asn
 1 5 10 15
 Thr Ser Trp Phe Val Thr Ser Ala Ala Ser Ala Gly Ala Arg His Arg
 20 25 30
 Thr Ser Ile Gln Asp Leu Glu Gly Thr Ser Asp Thr Trp Ser Ser Leu
 35 40 45
 Pro Arg His Lys Ala Ala Pro Leu His Ser Ser Ser Ala Pro Ala Gln
 50 55 60
 Gln Arg Glu Gly Ser Ser Ala Thr Ala Pro Thr Thr Thr Thr Ile Ile
 65 70 75 80
 Leu Thr Ser Pro Gly Pro Tyr Val Thr Lys Asp Leu Pro Arg Pro Gly
 85 90 95
 Arg Gln

<210> 873

<211> 363

<212> DNA

<213> Homo sapiens

<400> 873

nttgtttagc atcggttttt acgggtgtat cagcgcgttt agcagcgttt ttagcggatg
 60
 catcagcatg ttttgcgtca cggttttaca ctgtgctacc gtgttttagca tcatttttga
 120
 cggagggtatc aatacggtta gcatcggttt taacagatgt atcaacacgg gggtcatccg
 180
 ctttagcaga atccccagct ctagtagcca ctttagatac ttcagatttt atatgagtcg
 240
 cagttgtttc agcgtgagcc atgctgaatg tagaaccaag ggccaatgta attgctaaag
 300
 acaaagataa tttatttagt ttcattgttc gagagaagtg tgccaattcg gcgatacagt
 360
 cag
 363

<210> 874

<211> 108

<212> PRT

<213> Homo sapiens

<400> 874

Met Lys Leu Asn Lys Leu Ser Leu Ser Leu Ala Ile Thr Leu Ala Leu
 1 5 10 15
 Gly Ser Thr Phe Ser Met Ala His Ala Glu Thr Thr Ala Thr His Ile
 20 25 30
 Lys Ser Glu Val Ser Lys Val Ala Thr Arg Ala Gly Asp Ser Ala Lys
 35 40 45
 Ala Asp Glu Pro Arg Val Asp Thr Ser Val Lys Asn Asp Ala Lys Arg
 50 55 60
 Ile Asp Thr Ser Val Lys Asn Asp Ala Lys His Gly Ser Thr Val Val


```

65              70              75              80
Lys Arg Asp Ala Lys His Ala Asp Ala Ser Ala Lys Asn Ala Ala Lys
              85              90              95
Arg Ala Asp Thr Pro Val Lys Asn Asp Ala Lys Gln
              100              105

```

<210> 875
 <211> 355
 <212> DNA
 <213> Homo sapiens

```

<400> 875
acgcgtgaag gggaccctaa ctcgctctggg ctgtaggatg cgggcgaggc ttccacaaac
60
tcactgtctg ggggagaaga aaagcagaaa acaactcgaa tcgctaccat tcaggacgaa
120
cccgccaaagc accagctcaa gcgcaggtcc ccgggaaaaa gcgcgggctt ctctctccca
180
gcgctcagaa tccctgagcc ggaggccccc cgggattcag accgccagat cccagggag
240
tgacaaatcg ccgcagaaac ttgggggaca actcggccct ggcaccgcgc ggcttcagg
300
cgcgggcagg cgcgcgccaa ctttccccgc gtgccacccc gcggctcccc cggn
355

```

<210> 876
 <211> 106
 <212> PRT
 <213> Homo sapiens

```

<400> 876
Met Arg Ala Arg Leu Pro Gln Thr His Cys Leu Gly Glu Lys Lys Ser
 1              5              10              15
Arg Lys Gln Leu Glu Ser Leu Pro Phe Arg Thr Asn Pro Pro Ser Thr
              20              25              30
Ser Ser Ser Ala Gly Pro Arg Glu Lys Ala Arg Ala Ser Leu Ser Gln
              35              40              45
Arg Ser Glu Ser Leu Ser Arg Arg Pro Arg Gly Ile Gln Thr Ala Arg
              50              55              60
Ser Pro Gly Ser Asp Lys Ser Pro Gln Lys Leu Gly Gly Gln Leu Gly
65              70              75              80
Pro Gly Thr Ala Arg Leu Pro Gly Ala Gly Arg Arg Ala Pro Thr Phe
              85              90              95
Pro Ala Cys His Pro Ala Ala Pro Pro Ala
              100              105

```

<210> 877
 <211> 487
 <212> DNA
 <213> Homo sapiens

```

<400> 877
acgcgtactt tgggtaatga actgacgacc gctgagatcg actgccttta tctgtgttac
60

```

caatccacct atgctaaacg tggtcagcaa gggtatctca cacgagaatt ctttggtttg
 120
 ttggccaata ccatgggaga tcaaattcctt ttagtacagg cgtacagaga aggccaagcg
 180
 atcgccgcgt cgtggtgttt ctttgatgat cattcactat atgggcgtta ttggggctgt
 240
 atggaagaag tggattgcct gcattttgaa gcttgttatt accaaggaat cgagttttgt
 300
 ctcgaaaaag ggttacagca ttctgatccg ggtacacaag gggaacacaa gattgcgcgc
 360
 ggctttgaac ctgttttttag ccacagcgtg cattacattg ctcacaaagg ttttcgtgaa
 420
 gcgattggga atttctgtga ggaagaagcg caagctgtgc gcgagtatca tcaagatacc
 480
 cacgcgt
 487

<210> 878

<211> 162

<212> PRT

<213> Homo sapiens

<400> 878

Thr	Arg	Thr	Leu	Gly	Asn	Glu	Leu	Thr	Thr	Ala	Glu	Ile	Asp	Cys	Leu
1				5					10					15	
Tyr	Leu	Cys	Tyr	Gln	Ser	Thr	Tyr	Ala	Lys	Arg	Gly	Gln	Gln	Gly	Tyr
			20					25					30		
Leu	Thr	Arg	Glu	Phe	Phe	Gly	Leu	Leu	Ala	Asn	Thr	Met	Gly	Asp	Gln
			35				40					45			
Ile	Leu	Leu	Val	Gln	Ala	Tyr	Arg	Glu	Gly	Glu	Ala	Ile	Ala	Ala	Ser
	50					55				60					
Trp	Cys	Phe	Phe	Asp	Asp	His	Ser	Leu	Tyr	Gly	Arg	Tyr	Trp	Gly	Cys
65				70						75				80	
Met	Glu	Glu	Val	Asp	Cys	Leu	His	Phe	Glu	Ala	Cys	Tyr	Tyr	Gln	Gly
			85						90					95	
Ile	Glu	Phe	Cys	Leu	Glu	Lys	Gly	Leu	Gln	His	Phe	Asp	Pro	Gly	Thr
			100					105					110		
Gln	Gly	Glu	His	Lys	Ile	Ala	Arg	Gly	Phe	Glu	Pro	Val	Phe	Ser	His
			115				120					125			
Ser	Val	His	Tyr	Ile	Ala	His	Gln	Gly	Phe	Arg	Glu	Ala	Ile	Gly	Asn
	130					135				140					
Phe	Cys	Glu	Glu	Glu	Ala	Gln	Ala	Val	Arg	Glu	Tyr	His	Gln	Asp	Thr
145					150					155				160	
His	Ala														

<210> 879

<211> 993

<212> DNA

<213> Homo sapiens

<400> 879

nncttagcat ttaagccaac gaggcagcta atgtcctctg aacagcaaag gaaattcagc
 60

agccagtcca gtagggctct gacccctcct tcttacagta ctgctaaaaa ttcattggga
 120
 tcaagatcca gtgaatcctt tgggaagtac acatcgccag taatgagtga gcatggggac
 180
 gagcacaggc agctcctctc tcaccaatg caaggccctg gactccgtgc agctacctca
 240
 tccaaccact ctgtggacga gcaactgaag aatactgaca cgcacctcat cgacctggta
 300
 accaatgaga ttatcaccca aggacctcca gtggactgga atgacattgc tggctctgac
 360
 ctggtgaagg ctgtcattaa agaggaggtt ttatggccag tgttgaggtc agacgcgttc
 420
 agtggactga cggccttacc tcggagcadc cttttatttg gacctcgggg gacaggcaaa
 480
 acattattgg gcagatgcat cgctagtcag ctgggggcca catttttcaa aattgccggt
 540
 tctggactag tcgccaaggg gttaggagaa gcagagaaaa ttatccatgc ctcttttctt
 600
 gtggccaggt gtgccagcc ctcggtgatt tttgttagtg acattgacat gcttctctcc
 660
 tctcaagtga atgaggaaca tagtccagtc agtcggatga gaaccgaatt tctgatgcaa
 720
 ctggacactg tactaacttc ggctgaggac caaatcgtag taatttgtgc caccagtaaa
 780
 ccagaagaaa tagatgaatc ccttcggagg tacttcatga aacgactttt aatcccactt
 840
 cctgacagca cagcgaggca ccagataata gtacaactgc tctcacagca caattactgt
 900
 ctcaatgaca aggagtttgc actgctcgtc cagcgcacag aaggcttttc tggactagat
 960
 gtggctcatt tgtgtcagga agcagtgggtg ggc
 993

<210> 880

<211> 331

<212> PRT

<213> Homo sapiens

<400> 880

Xaa	Leu	Ala	Phe	Lys	Pro	Thr	Arg	Gln	Leu	Met	Ser	Ser	Glu	Gln	Gln
1				5				10					15		
Arg	Lys	Phe	Ser	Ser	Gln	Ser	Ser	Arg	Ala	Leu	Thr	Pro	Pro	Ser	Tyr
			20					25				30			
Ser	Thr	Ala	Lys	Asn	Ser	Leu	Gly	Ser	Arg	Ser	Ser	Glu	Ser	Phe	Gly
		35					40					45			
Lys	Tyr	Thr	Ser	Pro	Val	Met	Ser	Glu	His	Gly	Asp	Glu	His	Arg	Gln
	50					55				60					
Leu	Leu	Ser	His	Pro	Met	Gln	Gly	Pro	Gly	Leu	Arg	Ala	Ala	Thr	Ser
65				70						75				80	
Ser	Asn	His	Ser	Val	Asp	Glu	Gln	Leu	Lys	Asn	Thr	Asp	Thr	His	Leu
			85					90						95	
Ile	Asp	Leu	Val	Thr	Asn	Glu	Ile	Ile	Thr	Gln	Gly	Pro	Pro	Val	Asp
		100					105					110			
Trp	Asn	Asp	Ile	Ala	Gly	Leu	Asp	Leu	Val	Lys	Ala	Val	Ile	Lys	Glu

```

      115              120              125
Glu Val Leu Trp Pro Val Leu Arg Ser Asp Ala Phe Ser Gly Leu Thr
      130              135              140
Ala Leu Pro Arg Ser Ile Leu Leu Phe Gly Pro Arg Gly Thr Gly Lys
145              150              155              160
Thr Leu Leu Gly Arg Cys Ile Ala Ser Gln Leu Gly Ala Thr Phe Phe
      165              170              175
Lys Ile Ala Gly Ser Gly Leu Val Ala Lys Gly Leu Gly Glu Ala Glu
      180              185              190
Lys Ile Ile His Ala Ser Phe Leu Val Ala Arg Cys Arg Gln Pro Ser
      195              200              205
Val Ile Phe Val Ser Asp Ile Asp Met Leu Leu Ser Ser Gln Val Asn
      210              215              220
Glu Glu His Ser Pro Val Ser Arg Met Arg Thr Glu Phe Leu Met Gln
225              230              235              240
Leu Asp Thr Val Leu Thr Ser Ala Glu Asp Gln Ile Val Val Ile Cys
      245              250              255
Ala Thr Ser Lys Pro Glu Glu Ile Asp Glu Ser Leu Arg Arg Tyr Phe
      260              265              270
Met Lys Arg Leu Leu Ile Pro Leu Pro Asp Ser Thr Ala Arg His Gln
      275              280              285
Ile Ile Val Gln Leu Leu Ser Gln His Asn Tyr Cys Leu Asn Asp Lys
      290              295              300
Glu Phe Ala Leu Leu Val Gln Arg Thr Glu Gly Phe Ser Gly Leu Asp
305              310              315              320
Val Ala His Leu Cys Gln Glu Ala Val Val Gly
      325              330

```

<210> 881

<211> 313

<212> DNA

<213> Homo sapiens

<400> 881

cgcgtgagcg tcgacaatgc tccaggaacc ggtgtgtatg aggccgggga ttctaccggt
60

cgtggtttgc agggcatgcg tgagcgcgcc cgtatccatg gcggcaccgc gcgctggggc
120

gactcgagc attatgaagg cggtttcaac gtcacgggtg agattccaac atgagcggcc
180

aaaggatgaa catggacacg acgcgcccc aacacgggtc gggcttgccg acgatcagcc
240

ggctgggtgc gcaccggttt tgccatggtg ctggattcgc aggacgacat caccgtggcc
300

tggcaagccg acn

313

<210> 882

<211> 57

<212> PRT

<213> Homo sapiens

<400> 882

Arg Val Ser Val Asp Asn Ala Pro Gly Thr Gly Val Tyr Glu Ala Gly

```

      1           5           10           15
Asp Ser Thr Gly Arg Gly Leu Gln Gly Met Arg Glu Arg Ala Arg Ile
      20           25           30
His Gly Gly Thr Ala Arg Trp Gly Asp Ser Gln Tyr Tyr Glu Gly Gly
      35           40           45
Phe Asn Val Thr Val Glu Ile Pro Thr
      50           55

```

<210> 883
 <211> 576
 <212> DNA
 <213> Homo sapiens

```

<400> 883
naattaagat ctgggggtccc agtgtcattg gtgaaggcct tgggattcga ggcagctgag
60
tcctcactga ccaaggcaag ccatgcttct gagtgcttga ggccaccgaa atgaacaaat
120
ggaaaacact cccatctttt tcaagcctac cttttagcag aagaggcaga tacacaagcc
180
ctaaagatgt aacatcaggc tgagtggagg aaggctgaga agaaaaataa agcaggctca
240
ggaggagaga gtgatgtcag gatgcccttg tgcttactcc agcctccttg tgaaaaccca
300
gtctctctgt ctccagtga agacttggat ggcagccatc aggggaaggct ggggtcccagc
360
tgaggagtat ggtgtgagct ctatagacca tccctctctg caatcaataa acacttgcct
420
gtgaaagagg cccaagccac catccgcatg gacaccagtg caagtggccc caccgcctg
480
gtcctcagtg actgtgccac cagccatggg agcctgcgca tccaactgct gcataagctc
540
tccttcttgg tgaacgcctt agctaagcag gtcatg
576

```

<210> 884
 <211> 105
 <212> PRT
 <213> Homo sapiens

```

<400> 884
Met Pro Leu Cys Leu Leu Gln Pro Pro Cys Glu Asn Pro Ala Leu Leu
      1           5           10           15
Ser Pro Ser Glu Asp Leu Asp Gly Ser His Gln Gly Arg Leu Gly Pro
      20           25           30
Ser Trp Glu Tyr Gly Cys Glu Leu Tyr Arg Pro Ser Leu Ser Ala Ile
      35           40           45
Asn Lys His Leu Pro Val Lys Glu Ala Gln Ala Thr Ile Arg Met Asp
      50           55           60
Thr Ser Ala Ser Gly Pro Thr Arg Leu Val Leu Ser Asp Cys Ala Thr
      65           70           75           80
Ser His Gly Ser Leu Arg Ile Gln Leu Leu His Lys Leu Ser Phe Leu
      85           90           95
Val Asn Ala Leu Ala Lys Gln Val Met

```

100

105

<210> 885
 <211> 370
 <212> DNA
 <213> Homo sapiens

<400> 885
 actagtggcg ccctcatccg ggccgctgtc ccgctctcgg agtcgggtgc gttggagtcc
 60
 ggtgaggcga tgctgacgaa cgacacaccg gtgacttggg atggcgggaa agtacggggc
 120
 aggcgggtgt cgcgcctcgg tgcgatcgag ttgtcgtcga ccccggtccg cccagatccg
 180
 gtacgggctc gccacgtggc gctggaagca gtgaggtctg ggggacttga cgtagcgagc
 240
 ctgacgaaga acggtgaatc tttgcgacgc cgtcttgccc tggcccatcg ggtgtttggt
 300
 gatccctggc ccgatgtcag cgatgaggct ctgctagcct gcgccgagga gtggcttgac
 360
 ctcgacgcgt
 370

<210> 886
 <211> 123
 <212> PRT
 <213> Homo sapiens

<400> 886
 Thr Ser Gly Ala Leu Ile Arg Ala Ala Val Pro Leu Ser Glu Ser Ala
 1 5 10 15
 Ala Leu Glu Ser Gly Glu Ala Met Leu Thr Asn Asp Thr Pro Val Thr
 20 25 30
 Trp Asp Gly Gly Lys Val Arg Gly Arg Arg Val Ser Arg Leu Gly Ala
 35 40 45
 Ile Glu Leu Ser Ser Thr Pro Val Arg Pro Asp Pro Val Arg Ala Arg
 50 55 60
 His Val Ala Leu Glu Ala Val Arg Ser Gly Gly Leu Asp Val Ala Ser
 65 70 75 80
 Leu Thr Lys Asn Gly Glu Ser Leu Arg Arg Arg Leu Ala Leu Ala His
 85 90 95
 Arg Val Phe Gly Asp Pro Trp Pro Asp Val Ser Asp Glu Ala Leu Leu
 100 105 110
 Ala Cys Ala Glu Glu Trp Leu Asp Leu Asp Ala
 115 120

<210> 887
 <211> 447
 <212> DNA
 <213> Homo sapiens

<400> 887
 cagggcggtg cgctcggtcg cgtgctgccg atggtcatgc tcggaggcctt aaccgccatc
 60

attatctccg gctgcctgaa ccagcttggt aaacgctatc cgcactctgac cggcgaaggc
 120
 caactgatgc caaacctgac taatgctgat accacggctt cccaaccggc gttctccggt
 180
 aaagcggacg tgaccacat tgctccggc gcgttgctgg ccgtgctgct ttacatggtg
 240
 ggtaggttgg ttcacaagtt gattggcctg cctgctccgg ttggcatgtt gtttgtggcg
 300
 gtgctggtca aactgtgcaa cggcgttct cccgcctgc tcgaaggctc gcaggtggtt
 360
 tacaaattct tccagacctc cgtcacctat ccgattctgt tcgccgttgg cgtggcgatt
 420
 acgccgtggc aggaactggt caacgcg
 447

<210> 888

<211> 149

<212> PRT

<213> Homo sapiens

<400> 888

Gln	Gly	Val	Ala	Leu	Gly	Arg	Val	Leu	Pro	Met	Val	Met	Leu	Gly	Gly
1				5					10					15	
Leu	Thr	Ala	Ile	Ile	Ile	Ser	Gly	Cys	Leu	Asn	Gln	Leu	Gly	Lys	Arg
			20					25					30		
Tyr	Pro	His	Leu	Thr	Gly	Glu	Gly	Gln	Leu	Met	Pro	Asn	Arg	Ala	Asn
		35				40						45			
Ala	Asp	Thr	Thr	Ala	Ser	Gln	Pro	Ala	Phe	Ser	Gly	Lys	Ala	Asp	Val
	50					55					60				
Thr	Thr	Ile	Ala	Ser	Gly	Ala	Leu	Leu	Ala	Val	Leu	Leu	Tyr	Met	Val
65					70					75				80	
Gly	Arg	Leu	Val	His	Lys	Leu	Ile	Gly	Leu	Pro	Ala	Pro	Val	Gly	Met
			85					90						95	
Leu	Phe	Val	Ala	Val	Leu	Val	Lys	Leu	Cys	Asn	Gly	Ala	Ser	Pro	Arg
		100						105					110		
Leu	Leu	Glu	Gly	Ser	Gln	Val	Val	Tyr	Lys	Phe	Phe	Gln	Thr	Ser	Val
		115				120						125			
Thr	Tyr	Pro	Ile	Leu	Phe	Ala	Val	Gly	Val	Ala	Ile	Thr	Pro	Trp	Gln
	130					135						140			
Glu	Leu	Val	Asn	Ala											
145															

<210> 889

<211> 450

<212> DNA

<213> Homo sapiens

<400> 889

ggtagcacc ccc caccctgac aagaggtggc cagggaggaa gggaggggtc ttacctcccc
 60
 atctcccctc agtaaaattc aggatgccca gtgaagtttg aatgtcagat aaacaatttg
 120
 ttagtataag gatgtacctc gcattgaaat gatgccttgt aatttactaa atctgcaact
 180

atgcagcctt atttcatggc gggcagtggc ggtgatccca ggtttcaggg gcggggaagg
 240
 gtgctgggga gatcctgagg tcaggaaccc gtacacctct gcttctgcc tctcttcct
 300
 gtgccggcca caaggcaatg actcctgtgt gggcgcagag gcagaaatgg gtctggaagg
 360
 ggattcccag tgtctggcaa gttctggtaa attctgcatt ggaggttctc tctgtagtaa
 420
 ggggagttgg cctggccgcc cttcacgcgt
 450

<210> 890

<211> 100

<212> PRT

<213> Homo sapiens

<400> 890

Met	Met	Pro	Cys	Asn	Leu	Leu	Asn	Leu	Gln	Leu	Cys	Ser	Leu	Ile	Ser
1				5					10					15	
Trp	Arg	Ala	Val	Ala	Val	Ile	Pro	Gly	Phe	Arg	Gly	Gly	Glu	Gly	Cys
			20					25					30		
Trp	Gly	Asp	Pro	Glu	Val	Arg	Asn	Pro	Tyr	Thr	Ser	Ala	Ser	Ala	Leu
		35					40				45				
Ser	Ser	Leu	Cys	Arg	Pro	Gln	Gly	Asn	Asp	Ser	Cys	Val	Gly	Ala	Glu
		50				55					60				
Ala	Glu	Met	Gly	Leu	Glu	Gly	Asp	Ser	Gln	Cys	Leu	Ala	Ser	Ser	Gly
65					70				75					80	
Lys	Phe	Cys	Ile	Gly	Gly	Ser	Leu	Cys	Ser	Lys	Gly	Ser	Trp	Pro	Gly
			85					90						95	
Arg	Pro	Ser	Arg												
			100												

<210> 891

<211> 318

<212> DNA

<213> Homo sapiens

<400> 891

nncaccgtcc ccgtactgga tccgcgcgag gatttcgccg actgcatgca cattgacgta
 60
 ctggatccct tccacactga caacaccagt gagcacagtg acctggccac agatggccag
 120
 actaacggcc cggctgatag cgggactggc acccactctg agcagggaaa ctccgacata
 180
 tctagccccg tcagctctag tgacgtgctt aacaccaccg acagcactgc tggcaatacc
 240
 ggtgaaggta ctgccgcgaa tatgcctggt gacatggctc attcttcgac ggctaccac
 300
 ccctatgcaa gcaccggt
 318

<210> 892

<211> 106

<212> PRT

<213> Homo sapiens

<400> 892

```

Xaa Thr Val Pro Val Leu Asp Pro Arg Glu Asp Phe Ala Asp Cys Met
 1           5           10           15
His Ile Asp Val Leu Asp Pro Phe His Thr Asp Asn Thr Ser Glu His
          20           25           30
Ser Asp Leu Ala Thr Asp Gly Gln Thr Asn Gly Pro Ala Asp Ser Gly
          35           40           45
Thr Gly Thr His Ser Glu Gln Gly Asn Ser Asp Ile Ser Ser Pro Val
          50           55           60
Ser Ser Ser Asp Ala Ala Asn Thr Thr Asp Ser Thr Ala Gly Asn Thr
65           70           75           80
Gly Glu Gly Thr Ala Ala Asn Met Pro Gly Asp Met Ala His Ser Ser
          85           90           95
Thr Ala Thr His Pro Tyr Ala Ser Thr Gly
          100           105

```

<210> 893

<211> 510

<212> DNA

<213> Homo sapiens

<400> 893

```

nnggatccta tccctgaatc taagggtggt gacacatgtg tttgggatag caaggtagag
60
aagtcacaga aaaagcctgt ggaaaacagg atgaaggagg acaaaagcag catcagggaa
120
gcaatcagca aagccaagag tacagcaaata ataaagacag aacaggaagg tgaggcatct
180
gagaagagct tgcattctgag cccacagcat atcacacacc agactatgcc tataggacag
240
agaggcagtg agcaaggcaa acgtgtggag aacattaatg gaacctccta ccctagtcta
300
cagcagaaaa ccaatgctgt taagaaatta cataaatgtg atgaatgtgg gaaatccttc
360
aaatataatt cccgccttgt tcaacataaa attatgcaca ctggggaaaa gcgctatgaa
420
tgtgatgact gtggaggggac tttccggagc agctcgagcc ttcgggtcca caaacggatc
480
cacactgggt acggagagaa gacaacgcgt
510

```

<210> 894

<211> 170

<212> PRT

<213> Homo sapiens

<400> 894

```

Xaa Asp Pro Ile Pro Glu Ser Lys Val Gly Asp Thr Cys Val Trp Asp
 1           5           10           15
Ser Lys Val Glu Lys Ser Gln Lys Lys Pro Val Glu Asn Arg Met Lys
          20           25           30
Glu Asp Lys Ser Ser Ile Arg Glu Ala Ile Ser Lys Ala Lys Ser Thr

```

35	40	45
Ala Asn Ile Lys Thr Glu Gln Glu Gly Glu Ala Ser Glu Lys Ser Leu		
50	55	60
His Leu Ser Pro Gln His Ile Thr His Gln Thr Met Pro Ile Gly Gln		
65	70	75
Arg Gly Ser Glu Gln Gly Lys Arg Val Glu Asn Ile Asn Gly Thr Ser		
85	90	95
Tyr Pro Ser Leu Gln Gln Lys Thr Asn Ala Val Lys Lys Leu His Lys		
100	105	110
Cys Asp Glu Cys Gly Lys Ser Phe Lys Tyr Asn Ser Arg Leu Val Gln		
115	120	125
His Lys Ile Met His Thr Gly Glu Lys Arg Tyr Glu Cys Asp Asp Cys		
130	135	140
Gly Gly Thr Phe Arg Ser Ser Ser Ser Leu Arg Val His Lys Arg Ile		
145	150	155
His Thr Gly Tyr Gly Glu Lys Thr Thr Arg		
165	170	

<210> 895

<211> 1119

<212> DNA

<213> Homo sapiens

<400> 895

cggccgcaga attgggtcgg gcatttccag atgttcccgt ggttgattcg tccggcaatc
 60
 acgttcggga gagggtcgat tcaactcccc gattaatcgt tgccacccca agggccgaac
 120
 ccgcaccgga atcgggcttt tcctggggct gccttcctaa atgcgggtgc ctcttgtcg
 180
 aggcctggcc tggcggcggg ggagcagacc gtcgatcggg ggatggcaat cctggccttg
 240
 gtccgatcag tgcgggatgg gggccgggca gttatcgctg ggccttcgga ggacgcggcc
 300
 ttgcaggcca tgggtcgaaa tgatccagtc ggggtgggca cacgtgaact cgccgatcgt
 360
 cgggaggcac atttcccggc cgcggtgccg tgcggaattg tcgacggtga cccgaaagcg
 420
 gtggctacag cggcacagcg actacgcgag tgggttcggaa ccgaccttga gatgcttggc
 480
 ccagctccac aaccacgccg tgccagcgaa tcggaacggg atcgaattat cgtgcgtcct
 540
 cgtagcacga tgctctcgc cgagctttcc cagggtctat ttcggctacg ttccaaacac
 600
 actatgagcc gcgaaccagg aagcttacgc gtggtcatcg acccggccaa cttgttgtga
 660
 ggtcggtagg cttgcgggtg gagacttctt tttgctggta ccccggaagt ggccgtccca
 720
 acgcttaccg ccttggttagc cgatccccgt caagaggtag ctgccgtcct gacgcgtccg
 780
 gatgcagcag taggacggca ccgtactcca cgtccatgcc cggtcgccaa ggctgccgag
 840
 gaactcggta tccccgccat taaggcgacc agcgtgaagt ccggcgaggg tcacgatgcc
 900

gtcaattccc tcgatgtcga cgtagccgtc gtcgtagcct acggaggtct cattccccgcc
 960
 gatctgctgg cagtaccacg acacggctgg attaaacttac acttttctct cctaccgcga
 1020
 tggcgcgggc ctgctcccat acaacggggc atcatggcgg gggatgagga gacgggcgct
 1080
 tgtgtctttc agctagttga aagcctcgat gccggaccg
 1119

<210> 896

<211> 147

<212> PRT

<213> Homo sapiens

<400> 896

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 Val Ala Lys Ala Ala Glu Glu Leu Gly Ile Pro Ala Ile Lys Ala Thr
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 Ser Val Lys Ser Gly Glu Gly His Asp Ala Val Thr Ser Leu Asp Val
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 Ala Gly Pro
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<210> 897

<211> 384

<212> DNA

<213> Homo sapiens

<400> 897

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<210> 898
<211> 128
<212> PRT
<213> Homo sapiens

<400> 898
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35 40 45
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50 55 60
Thr Lys Met Gly Phe Pro Gly Tyr Phe Leu Ile Val Ala Asp Phe Ile
65 70 75 80
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<211> 6171
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<213> Homo sapiens

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 6171

<210> 900

<211> 734

<212> PRT

<213> Homo sapiens

<400> 900

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			20					25					30		
Leu	Gln	Leu	Leu	Tyr	Leu	Thr	Asn	Asn	Leu	Leu	Thr	Asp	Gln	Cys	Ile
			35				40					45			
Pro	Val	Leu	Val	Gly	His	Leu	His	Leu	Arg	Ile	Leu	His	Leu	Ala	Asn
			50				55				60				
Asn	Gln	Leu	Gln	Thr	Phe	Pro	Ala	Ser	Lys	Leu	Asn	Lys	Leu	Glu	Gln
65					70					75				80	
Leu	Glu	Glu	Leu	Asn	Leu	Ser	Gly	Asn	Lys	Leu	Lys	Thr	Ile	Pro	Thr
			85					90					95		
Thr	Ile	Ala	Asn	Cys	Lys	Arg	Leu	His	Thr	Leu	Val	Ala	His	Ser	Asn
			100				105						110		
Asn	Ile	Ser	Ile	Phe	Pro	Glu	Ile	Leu	Gln	Leu	Pro	Gln	Ile	Gln	Phe
			115				120					125			
Val	Asp	Leu	Ser	Cys	Asn	Asp	Leu	Thr	Glu	Ile	Leu	Ile	Pro	Glu	Ala
			130				135				140				
Leu	Pro	Ala	Thr	Leu	Gln	Asp	Leu	Asp	Leu	Thr	Gly	Asn	Thr	Asn	Leu
145					150					155				160	
Val	Leu	Glu	His	Lys	Thr	Leu	Asp	Ile	Phe	Ser	His	Ile	Thr	Thr	Leu
			165					170					175		
Lys	Ile	Asp	Gln	Lys	Pro	Leu	Pro	Thr	Thr	Asp	Ser	Thr	Val	Thr	Ser
			180				185						190		
Thr	Phe	Trp	Ser	His	Gly	Leu	Ala	Glu	Met	Ala	Gly	Gln	Arg	Asn	Lys

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210	215	220
Ala Val Tyr Gly Met	Phe Asp Gly Asp Arg Asn	Glu Leu Pro Arg
225	230	235
Leu Leu Gln Cys Thr	Met Ala Asp Val Leu Leu	Glu Glu Val Gln Gln
245	250	255
Ser Thr Asn Asp Thr	Val Phe Met Ala Asn Thr	Phe Leu Val Ser His
260	265	270
Arg Lys Leu Gly Met	Ala Gly Gln Lys Leu Gly	Ser Ser Ala Leu Leu
275	280	285
Cys Tyr Ile Arg Pro	Asp Thr Ala Asp Pro Ala	Ser Ser Phe Ser Leu
290	295	300
Thr Val Ala Asn Val	Gly Thr Cys Gln Ala Val	Leu Cys Arg Gly Gly
305	310	315
Lys Pro Val Pro Leu	Ser Lys Val Phe Ser Leu	Glu Gln Asp Pro Glu
325	330	335
Glu Ala Gln Arg Val	Lys Asp Gln Lys Ala Ile	Ile Thr Glu Asp Asn
340	345	350
Lys Val Asn Gly Val	Thr Cys Cys Thr Arg Met	Leu Gly Cys Thr Tyr
355	360	365
Leu Tyr Pro Trp Ile	Leu Pro Lys Pro His Ile	Ser Ser Thr Pro Leu
370	375	380
Thr Ile Gln Asp Glu	Leu Leu Ile Leu Gly Asn	Lys Ala Leu Trp Glu
385	390	395
His Leu Ser Tyr Thr	Glu Ala Val Asn Ala Val	Arg His Val Gln Asp
405	410	415
Pro Leu Ala Ala Ala	Lys Lys Leu Cys Thr Leu	Ala Gln Ser Tyr Gly
420	425	430
Cys Gln Asp Ser Val	Gly Ala Met Val Val Tyr	Leu Asn Ile Gly Glu
435	440	445
Glu Gly Cys Thr Cys	Glu Met Asn Gly Leu Thr	Leu Pro Gly Pro Val
450	455	460
Gly Phe Ala Ser Thr	Thr Thr Ile Lys Asp Ala	Pro Lys Pro Ala Thr
465	470	475
Pro Ser Ser Ser Ser	Gly Ile Ala Ser Glu Phe	Ser Ser Glu Met Ser
485	490	495
Thr Ser Glu Val Ser	Ser Glu Val Gly Ser Thr	Ala Ser Asp Glu His
500	505	510
Asn Ala Gly Gly Leu	Asp Thr Ala Leu Leu Pro	Arg Pro Glu Arg Arg
515	520	525
Cys Ser Leu His Pro	Thr Pro Thr Ser Gly Leu	Phe Gln Arg Gln Pro
530	535	540
Ser Ser Ala Thr Phe	Ser Ser Asn Gln Ser Asp	Asn Gly Leu Asp Ser
545	550	555
Asp Asp Asp Gln Pro	Val Glu Gly Val Ile Thr	Asn Gly Ser Lys Val
565	570	575
Glu Val Glu Val Asp	Ile His Cys Cys Arg Gly	Arg Asp Leu Glu Asn
580	585	590
Ser Pro Pro Leu Ile	Glu Ser Ser Pro Thr Leu	Cys Ser Glu Glu His
595	600	605
Ala Arg Gly Ser Cys	Phe Gly Ile Arg Arg Gln	Asn Ser Val Asn Ser
610	615	620
Gly Met Leu Leu Pro	Met Ser Lys Asp Arg Met	Glu Leu Gln Lys Ser

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Val Pro Leu Glu Asp Ser Leu Asn Leu Ile Glu Val Ala Thr Glu Val
          660          665          670
Pro Lys Arg Lys Thr Gly Tyr Phe Ala Ala Pro Thr Gln Met Glu Pro
          675          680          685
Glu Asp Gln Phe Val Val Pro His Asp Leu Glu Glu Glu Val Lys Glu
          690          695          700
Gln Met Lys Gln His Gln Asp Ser Arg Leu Glu Pro Glu Pro His Glu
705          710          715          720
Glu Asp Arg Thr Glu Pro Pro Glu Glu Phe Asp Thr Ala Leu
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<210> 901
<211> 309
<212> DNA
<213> Homo sapiens

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309

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<210> 902
<211> 102
<212> PRT
<213> Homo sapiens

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<400> 902
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Gly Lys Leu His Phe Leu Phe Leu Leu Met Gln Gln Gly His Pro Lys
          20          25          30
Ile Arg Leu Pro Ser Val Ser Val Val Ser Ser Asp Gly His Leu Trp
          35          40          45
Ser Phe Gln Arg Leu Met His Trp Val Thr Arg His Cys Lys Arg Pro
          50          55          60
Gln Ile Ala Gln His His Leu Thr Phe Thr Pro His His Ile Asn Ile
65          70          75          80
Asp Ala Arg Arg Ser Lys Ala Asp Ala Thr Phe Arg Ala Ala Ser Ile
          85          90          95
Gln Lys Thr Pro Leu Met
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<210> 903
 <211> 349
 <212> DNA
 <213> Homo sapiens

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<210> 904
 <211> 102
 <212> PRT
 <213> Homo sapiens

<400> 904
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 Arg Asn Arg Arg Gln Arg Leu Gly Pro Thr Gln Gly Val Lys Ser Asn
 20 25 30
 Arg Lys Pro Phe Leu His Lys Ala Thr Met Gly Leu Pro Lys Ile Lys
 35 40 45
 Pro Cys His Pro Arg Asp Cys Ser Pro Ile Leu Tyr His His Glu Val
 50 55 60
 Gln Lys Ile Pro Ser Cys Glu Phe Ser Phe Lys Trp Pro Trp Ser Pro
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 Ile Phe Ile Leu Arg Leu
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<210> 905
 <211> 377
 <212> DNA
 <213> Homo sapiens

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<210> 906
 <211> 125
 <212> PRT
 <213> Homo sapiens

<400> 906
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 35 40 45
 His Gly Val Thr Ser Thr Val Val Pro Asn Ile Val Asp Val Glu Leu
 50 55 60
 Phe Asp Arg Pro Asp Arg Arg His Glu Gly Thr Ile Val Val Ser Val
 65 70 75 80
 Ala Thr Leu Asn Pro Gly Lys Gly Met Ile Glu Leu Ala Gln Ala Val
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 Arg His Gln Leu Glu Ala Ile Ala Ala Asp Asn Pro Arg
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<210> 907
 <211> 332
 <212> DNA
 <213> Homo sapiens

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 332

<210> 908
 <211> 106
 <212> PRT
 <213> Homo sapiens

<400> 908

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Thr Arg Arg Met Met Lys Ser Val Thr Gly Ser Phe Leu Gly Gly Asn
 1           5           10           15
Arg Glu Val Gly Asp Gln Phe Phe Asn Gly Glu Val Gln Leu Asn Leu
      20           25           30
Val Pro Gln Gly Thr Phe Ala Glu Arg Ile Arg Ala Gly Ala Ala Gly
      35           40           45
Ile Ala Ala Phe Phe Thr Pro Thr Gly Tyr Gly Thr Ala Val Gln Lys
      50           55           60
Gly Glu Leu Val Leu Lys Tyr Glu Lys Lys Asp Gly Lys Ala Val Pro
65           70           75           80
Val Met Thr Ser Lys Pro Arg Glu Val Arg Ser Phe Asp Gly Arg Asp
      85           90           95
Tyr Ile Ile Glu Glu Val Ile Lys Asp Glu
      100           105

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<210> 909

<211> 318

<212> DNA

<213> Homo sapiens

<400> 909

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acgcgtcggg catggcagct gtacagatct atcgcgtcag cagggcctac gcacacatga
60
tgccgcaggg gcaccgacgc tgtcgccatc aaaagagccg cctcgcgccc gcagcgcttc
120
ccagggacgg cgactcacgt ggctcgacac gcgcgcgcga gtcgcgtggg tgtgtcacgc
180
cccttttttt cccaccccaa caccgaaccg gcgggcatg gctgaggatt cgcaccccat
240
tcgctccggc ttgcgcatgc tcaagcgctc ctggagctcg aatgagaatg taccgcccgc
300
acaaagctcg ccgcccgc
318

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<210> 910

<211> 102

<212> PRT

<213> Homo sapiens

<400> 910

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Met Ala Ala Val Gln Ile Tyr Arg Val Ser Arg Ala Tyr Ala His Met
 1           5           10           15
Met Pro Gln Gly His Arg Arg Cys Arg His Gln Lys Ser Arg Leu Ala
      20           25           30
Pro Ala Ala Pro Pro Arg Asp Gly Asp Ser Arg Gly Ser Thr Arg Ala
      35           40           45
Arg Glu Ser Arg Gly Cys Val Thr Pro Leu Phe Phe Pro Pro Gln His
      50           55           60
Arg Thr Gly Gly Pro Trp Leu Arg Ile Arg Thr Pro Phe Ala Pro Ala
65           70           75           80
Cys Ala Cys Ser Ser Ala Pro Gly Ala Arg Met Arg Met Tyr Arg Arg
      85           90           95
His Lys Ala Arg Arg Arg

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100

<210> 911
 <211> 506
 <212> DNA
 <213> Homo sapiens

<400> 911
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 caaccttatg aggctggcct tgggggaacc ctgttttagg gatgagctga acttaccggg
 120
 aggctgcatg cgaggttggt gtgaaatgca tatctggctt tgtagctggt cggctcacct
 180
 ctgggggttg cacaggggcg ggggttctgc catggctaga atgcgctaag gggtggaac
 240
 gaagcctgct gggcccgga accacagagc agcctggcct ttgaaggaga ccctgtggca
 300
 cccctgccc accccaagt ccagccattt cactccctg gagatggtgc aaagcaagaa
 360
 aaaaaaaaa atccagtgtt ctcaggtcag cctccacca gccaggattc atcgtctgat
 420
 ctgtttgggg agagagcatg gagtgggtga gatgggttg gcccagtggt tttctgatta
 480
 actgcagtt cacctgaaac attttg
 506

<210> 912
 <211> 129
 <212> PRT
 <213> Homo sapiens

<400> 912
 Met Phe Gln Val Asn Cys Glu Leu Ile Arg Lys His Trp Gly Pro Thr
 1 5 10 15
 His Leu His His Ser Met Leu Ser Pro Gln Thr Asp Gln Thr Met Asn
 20 25 30
 Pro Gly Trp Trp Lys Ala Asp Leu Arg Thr Leu Asp Phe Phe Phe Phe
 35 40 45
 Leu Ala Leu His His Leu Gln Gly Ser Glu Met Ala Gly Leu Gly Gly
 50 55 60
 Gly Gln Gly Val Pro Gln Gly Leu Leu Gln Arg Pro Gly Cys Ser Val
 65 70 75 80
 Val Pro Gly Pro Ser Arg Leu Arg Phe His Pro Leu Ala His Ser Ser
 85 90 95
 His Gly Arg Thr Pro Ala Pro Val Pro Thr Pro Glu Val Ser Arg Pro
 100 105 110
 Ala Thr Lys Pro Asp Met His Phe Thr Pro Thr Ser His Ala Ala Ser
 115 120 125
 Arg

<210> 913
 <211> 339

<212> DNA

<213> Homo sapiens

<400> 913

cgcttcatgg cgtgggtcag gcgtacggtt ccggctactg gtgactaccg tggcacgaaa
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 tttttcgttc gcgagaacgg taaaaccctc gcaacctcga tgttcattgg ttgtgtcgcc
 120
 ctgggcgcca cggacctgct tttcgccctc gactcgatcc cggcgctccta tggtttcacc
 180
 aacgaggggt acctatcct taccgctaac gtctttgtct tcatgggctt gcgtcagttg
 240
 tatttcctta ttggaagcct gttggaacgt ctggtgtact tgcgctggg actggtcggtg
 300
 attttgggct ttatcgccct caagctcatt ggccacgcg
 339

<210> 914

<211> 113

<212> PRT

<213> Homo sapiens

<400> 914

Arg	Phe	Met	Ala	Trp	Phe	Arg	Arg	Thr	Val	Pro	Ala	Thr	Gly	Asp	Tyr
1				5					10					15	
Arg	Gly	Thr	Lys	Phe	Phe	Val	Arg	Glu	Asn	Gly	Lys	Thr	Leu	Ala	Thr
			20					25					30		
Ser	Met	Phe	Met	Val	Cys	Val	Ala	Leu	Gly	Ala	Thr	Asp	Leu	Leu	Phe
		35					40					45			
Ala	Leu	Asp	Ser	Ile	Pro	Ala	Ser	Tyr	Gly	Phe	Thr	Asn	Glu	Gly	Tyr
	50					55				60					
Leu	Ile	Leu	Thr	Ala	Asn	Val	Phe	Ala	Leu	Met	Gly	Leu	Arg	Gln	Leu
65					70				75					80	
Tyr	Phe	Leu	Ile	Gly	Ser	Leu	Leu	Glu	Arg	Leu	Val	Tyr	Leu	Ser	Leu
			85					90					95		
Gly	Leu	Val	Val	Ile	Leu	Gly	Phe	Ile	Ala	Leu	Lys	Leu	Ile	Gly	His
			100					105					110		

Ala

<210> 915

<211> 663

<212> DNA

<213> Homo sapiens

<400> 915

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 gacagtgaag atcctgttgt ggacattggt gctgctaccc ctgtcatcaa tggacagtca
 120
 ttaaccaagg gagagacttg catgaatcct caggatttta agccaggagc aatggttctg
 180
 gagcagaatg gaaaatcggg acacactttg actggtgatg gtctcaatgg accatcagat
 240

gcaagtgagc agagagtatc catggcatcg tcaggcagct cccagcctga actagtgact
 300
 atcccctttga ttaagggccc taaagggttt gggtttgcaa ttgctgacag ccctactgga
 360
 cagaagggtga aaatgatact ggatagtcag tgggtgtcaag gccttcagaa aggagatata
 420
 attaaggaaa tataccatca aaatgtgcag aatttaacac atctccaagt ggtagagggtg
 480
 ctaaagcagt ttccagtagg tgctgatgta ccattgctta tcttaagagg aggtccccct
 540
 tcaccaacca aaagtgccaa aatgaaaaca gataaaaagg aaaatgcagg aagtttggag
 600
 gccataaatg agcctattcc tcagcctatg ccttttccac cgagcattat caggtcagga
 660
 tcc
 663

<210> 916

<211> 221

<212> PRT

<213> Homo sapiens

<400> 916

Xaa	Val	Pro	Val	Asn	Gln	Tyr	Val	Asn	Leu	Thr	Leu	Cys	Arg	Gly	Tyr
1				5					10					15	
Pro	Leu	Pro	Asp	Asp	Ser	Glu	Asp	Pro	Val	Val	Asp	Ile	Val	Ala	Ala
			20					25					30		
Thr	Pro	Val	Ile	Asn	Gly	Gln	Ser	Leu	Thr	Lys	Gly	Glu	Thr	Cys	Met
			35				40					45			
Asn	Pro	Gln	Asp	Phe	Lys	Pro	Gly	Ala	Met	Val	Leu	Glu	Gln	Asn	Gly
			50				55				60				
Lys	Ser	Gly	His	Thr	Leu	Thr	Gly	Asp	Gly	Leu	Asn	Gly	Pro	Ser	Asp
65					70					75				80	
Ala	Ser	Glu	Gln	Arg	Val	Ser	Met	Ala	Ser	Ser	Gly	Ser	Ser	Gln	Pro
				85						90				95	
Glu	Leu	Val	Thr	Ile	Pro	Leu	Ile	Lys	Gly	Pro	Lys	Gly	Phe	Gly	Phe
			100					105					110		
Ala	Ile	Ala	Asp	Ser	Pro	Thr	Gly	Gln	Lys	Val	Lys	Met	Ile	Leu	Asp
			115				120					125			
Ser	Gln	Trp	Cys	Gln	Gly	Leu	Gln	Lys	Gly	Asp	Ile	Ile	Lys	Glu	Ile
			130				135					140			
Tyr	His	Gln	Asn	Val	Gln	Asn	Leu	Thr	His	Leu	Gln	Val	Val	Glu	Val
145				150						155				160	
Leu	Lys	Gln	Phe	Pro	Val	Gly	Ala	Asp	Val	Pro	Leu	Leu	Ile	Leu	Arg
				165						170				175	
Gly	Gly	Pro	Pro	Ser	Pro	Thr	Lys	Ser	Ala	Lys	Met	Lys	Thr	Asp	Lys
			180					185					190		
Lys	Glu	Asn	Ala	Gly	Ser	Leu	Glu	Ala	Ile	Asn	Glu	Pro	Ile	Pro	Gln
			195				200					205			
Pro	Met	Pro	Phe	Pro	Pro	Ser	Ile	Ile	Arg	Ser	Gly	Ser			
			210				215					220			

<210> 917

<211> 615

<212> DNA

<213> Homo sapiens

<400> 917

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 ttcaaacatg accccacgtc ggccaacctc ctgcagctgg tgcgctcgtc cggagacatc
 120
 caggagggcg acctgggtgga ggtgggtgctg tcggcctcgg ccaccttcga ggacttccag
 180
 atccgcccgc acgcccctcac ggtgcactcc tatcggggcg ctgccttctg tgatcactgc
 240
 ggggagatgc tcttcggcct agtgcgccag ggctcaagt gcgatggctg cgggctgaac
 300
 taccacaagc gctgtgcctt cagcatcccc aacaactgta gtggggcccg caaacggcgc
 360
 ctgtcatcca cgtctctggc cagtggccac tcggtgcgcc tcggcacctc cgagtccctg
 420
 ccctgcacgg ctgaagagga gccgtagcac caccgaactc ctgcctcgcc gtccccgtca
 480
 tctcttctc cctcttctgc ctcatcgtat acggggccgc ccattgagct ggacaagatg
 540
 ctgctctcca aggtcaaggt gccgcacacc ttctcatcc acagctatac acggcccacc
 600
 gtttgccagg cttgc
 615

<210> 918

<211> 148

<212> PRT

<213> Homo sapiens

<400> 918

Ile Val Asp Gln Lys Phe Pro Glu Cys Gly Phe Tyr Gly Leu Tyr Asp
 1 5 10 15
 Lys Ile Leu Leu Phe Lys His Asp Pro Thr Ser Ala Asn Leu Leu Gln
 20 25 30
 Leu Val Arg Ser Ser Gly Asp Ile Gln Glu Gly Asp Leu Val Glu Val
 35 40 45
 Val Leu Ser Ala Ser Ala Thr Phe Glu Asp Phe Gln Ile Arg Pro His
 50 55 60
 Ala Leu Thr Val His Ser Tyr Arg Ala Pro Ala Phe Cys Asp His Cys
 65 70 75 80
 Gly Glu Met Leu Phe Gly Leu Val Arg Gln Gly Leu Lys Cys Asp Gly
 85 90 95
 Cys Gly Leu Asn Tyr His Lys Arg Cys Ala Phe Ser Ile Pro Asn Asn
 100 105 110
 Cys Ser Gly Ala Arg Lys Arg Arg Leu Ser Ser Thr Ser Leu Ala Ser
 115 120 125
 Gly His Ser Val Arg Leu Gly Thr Ser Glu Ser Leu Pro Cys Thr Ala
 130 135 140
 Glu Glu Glu Pro
 145

<210> 919
 <211> 294
 <212> DNA
 <213> Homo sapiens

<400> 919
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 acaaatgcga tcctgctcga tagcgcagcg ggtgagtacc tcgccaagat gggcccgccg
 120
 gaagaagact tcatttcgaa cgcgacccat cgtggcgatc acctgaccgc acagcgcgcc
 180
 accttcgcca acccgacctt gctcaacgag atggccgtag tcgatggtga agtgaagaaa
 240
 ggctcgcttg cccgcgtgga accggaaggc catgtgatgc gcatgtggga agcc
 294

<210> 920
 <211> 98
 <212> PRT
 <213> Homo sapiens

<400> 920
 Thr Gly Met Arg Pro Leu Ala Val Leu Gly Asp Asn Ile Thr Thr Asp
 1 5 10 15
 His Leu Ser Pro Thr Asn Ala Ile Leu Leu Asp Ser Ala Ala Gly Glu
 20 25 30
 Tyr Leu Ala Lys Met Gly Pro Pro Glu Glu Asp Phe Ile Ser Asn Ala
 35 40 45
 Thr His Arg Gly Asp His Leu Thr Ala Gln Arg Ala Thr Phe Ala Asn
 50 55 60
 Pro Thr Leu Leu Asn Glu Met Ala Val Val Asp Gly Glu Val Lys Lys
 65 70 75 80
 Gly Ser Leu Ala Arg Val Glu Pro Glu Gly His Val Met Arg Met Trp
 85 90 95
 Glu Ala

<210> 921
 <211> 378
 <212> DNA
 <213> Homo sapiens

<400> 921
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 60
 aaccaggacg tgctgttggt catcgacaac atcttccggt tctcccaggc tggttctgag
 120
 gtttcaaccc tgctaggtcg tatgccctcg gcggtgggct accagcccaa cttggccgac
 180
 gagatggggc aattgcagga gcgaatcacc tcgaccctg gtcactccat cacctcgatg
 240
 caggccgtct acgtccccgc tgacgattac accgaccctg ctccggcgac gaccttcgcc
 300

cacctggatg ccaccacgga gctttctcgt gagattgcct ctcgtggcct gtacccggcc
 360
 gtggatccgc tggcgctcg
 378

<210> 922

<211> 126

<212> PRT

<213> Homo sapiens

<400> 922

Thr	Arg	Leu	Arg	Ile	Ala	Leu	Thr	Gly	Leu	Thr	Met	Ala	Glu	Tyr	Phe
1				5				10					15		
Arg	Asp	Val	Gln	Asn	Gln	Asp	Val	Leu	Leu	Phe	Ile	Asp	Asn	Ile	Phe
		20					25					30			
Arg	Phe	Ser	Gln	Ala	Gly	Ser	Glu	Val	Ser	Thr	Leu	Leu	Gly	Arg	Met
	35					40					45				
Pro	Ser	Ala	Val	Gly	Tyr	Gln	Pro	Asn	Leu	Ala	Asp	Glu	Met	Gly	Gln
	50				55					60					
Leu	Gln	Glu	Arg	Ile	Thr	Ser	Thr	Arg	Gly	His	Ser	Ile	Thr	Ser	Met
65				70					75					80	
Gln	Ala	Val	Tyr	Val	Pro	Ala	Asp	Asp	Tyr	Thr	Asp	Pro	Ala	Pro	Ala
			85					90					95		
Thr	Thr	Phe	Ala	His	Leu	Asp	Ala	Thr	Thr	Glu	Leu	Ser	Arg	Glu	Ile
		100					105					110			
Ala	Ser	Arg	Gly	Leu	Tyr	Pro	Ala	Val	Asp	Pro	Leu	Ala	Ser		
	115						120					125			

<210> 923

<211> 571

<212> DNA

<213> Homo sapiens

<400> 923

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 120
 caacgcaaga atgtcgaaga agaagacatc ttccgccccc accttgcgct attggaagac
 180
 cccacgctgc tggacgccgc cactggtgcc atcgaacacg gcagcgccgc caccacgcc
 240
 tggcgcgatg caatccaggc gcaatgcgcc gtgttgctgg ccctgggcaa accgctgttt
 300
 gccgagcgcg ccaacgacct gcgcgatctg caacagcgag tactgcgtgc gctgttgggg
 360
 gaagcctggc acttcgaatt gccggccggg ccgattttca ggnnggccat taacttaccc
 420
 ccttccgctt tgttgcaact gagtgcctaa aacgccgtgg gtatttgcac ggccgaaggc
 480
 ggcgctacgt ctcacgtcgc gattttggcc cgaggcaaag gcttgccgtg cgtggctcgcg
 540
 ctgggcgcgc aagtgtcga cgtgccccaa g
 571

<210> 924
 <211> 190
 <212> PRT
 <213> Homo sapiens

<400> 924
 Thr Gly Ile Glu Leu Pro Gln Asp Thr Gly Lys His Val Ala Asp Glu
 1 5 10 15
 Gln Leu Gln Arg Leu Asp Thr Ala Leu Glu His Val Arg Gly Glu Ile
 20 25 30
 Arg Ile Thr Leu Glu His Ala Arg Gln Arg Lys Asn Val Glu Glu Glu
 35 40 45
 Asp Ile Phe Ala Ala His Leu Ala Leu Leu Glu Asp Pro Thr Leu Leu
 50 55 60
 Asp Ala Ala Thr Gly Ala Ile Glu His Gly Ser Ala Ala Thr His Ala
 65 70 75 80
 Trp Arg Asp Ala Ile Gln Ala Gln Cys Ala Val Leu Leu Ala Leu Gly
 85 90 95
 Lys Pro Leu Phe Ala Glu Arg Ala Asn Asp Leu Arg Asp Leu Gln Gln
 100 105 110
 Arg Val Leu Arg Ala Leu Leu Gly Glu Ala Trp His Phe Glu Leu Pro
 115 120 125
 Ala Gly Pro Ile Phe Arg Xaa Ala Ile Asn Leu Pro Pro Ser Ala Leu
 130 135 140
 Leu Gln Leu Ser Ala Gln Asn Ala Val Gly Ile Cys Met Ala Glu Gly
 145 150 155 160
 Gly Ala Thr Ser His Val Ala Ile Leu Ala Arg Gly Lys Gly Leu Pro
 165 170 175
 Cys Val Val Ala Leu Gly Ala Glu Val Leu Asp Val Pro Gln
 180 185 190

<210> 925
 <211> 620
 <212> DNA
 <213> Homo sapiens

<400> 925
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 ncatgggtgtg tgcacgtgtg cnaactgtgta tgcattggtaa tgtgcacgtg tgcactgtgt
 120
 gtggtgtgta tgcattggtgt gtgcacgtgt gcactgtgtg tgtgtgtatg catgtgtgtg
 180
 cactgtgtgcc tgtgtgtatg catggtaatg tgcgtgtgca ctgtgtggtg tgtatgcatg
 240
 tgtgtgcacg tgtgcactgt gtatgcatag tgtgtgcacg tgtgcactgt gtgtggatgc
 300
 atggtaatgt gcacgtgtgc actgtgtgtg gtgtgtatga tgggtgtgtgc acgtgtgcac
 360
 ggtgtgtggt gtgtatgcat gtgtgtgcac gtgtgcactg tgtggcaggg gtgtttggtg
 420
 tgtgtgcatg tatgcatggt gtgtgcatac gtgtgcagca gcacctggtc ccatctccag
 480

tgcccagcag catcacacgc actttgggtgc tttataaatg catggtcagt gaggctgcca
 540
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 600
 aggaaacatt tttaaaattt
 620

<210> 926
 <211> 89
 <212> PRT
 <213> Homo sapiens

<400> 926
 Thr Arg Ala Leu Cys Val Cys Met Val Thr Tyr Thr Cys Ala Leu Cys
 1 5 10 15
 Val Val Cys Met Xaa Trp Cys Val His Val Cys Xaa Cys Val Cys Met
 20 25 30
 Val Met Cys Thr Cys Ala Leu Cys Val Val Cys Met His Gly Val Cys
 35 40 45
 Thr Cys Ala Leu Cys Val Cys Val Cys Met Cys Val His Val Cys Leu
 50 55 60
 Cys Val Cys Met Val Met Cys Val Cys Thr Val Trp Cys Val Cys Met
 65 70 75 80
 Cys Val His Val Cys Thr Val Tyr Ala
 85

<210> 927
 <211> 360
 <212> DNA
 <213> Homo sapiens

<400> 927
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 aagaggcatt tggggctctg ttcagatcat tccaacagca aaccgggcat ggagacccca
 120
 tctcaggtct gtgcttctct gggggccacc cagccatcct gccaccagc tcagaggcag
 180
 ggacaaagcc ctcccaagag gcagcaggca gcaagggtca gccagcgag tggggacagg
 240
 caggtacaac ctggaaaccc caaaggaccc cagatggcaa tgtgacacgg cccatccacc
 300
 aagcacctgt aatgccggct tcccacagag gcgagccaga tcctggcact attctttaag
 360

<210> 928
 <211> 111
 <212> PRT
 <213> Homo sapiens

<400> 928
 Met Glu Leu Leu Glu Ile Val Arg His Asp Gln Arg Glu Glu Ala Phe
 1 5 10 15
 Gly Val Leu Phe Arg Ser Phe Gln Gln Gln Thr Gly His Gly Asp Pro

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<210> 929
<211> 2340
<212> DNA
<213> Homo sapiens
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926

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 1200
 agctccgcag ggggctgcag gaaccaccct ggcacgttct ggaccaaccc ccagtttaag
 1260
 atctctcttc ctgaggggga tgaccagag gatgacgcag agggcaatgt tgtggtctgc
 1320
 acctgcctgg tggccctaatt gcagaagaac tggcggcatg cacggcagca gggagcccag
 1380
 ctgcagacca ttggctttgt cctctacgcg gtcccaaaag agtttcagaa cattcaggat
 1440
 gtccacttga agaaggaatt cttcacgaag tatcaggacc acggcttctc agagatcttc
 1500
 accaactcac gggaggtgag cagccaactc cggtgcctc cgggggaata tatcattatt
 1560
 cctccacct ttgagccaca cagagatgct gacttctgc ttcgggtctt caccgagaag
 1620
 cacagcgagt catgggaatt ggatgaagtc aactatgctg agcaactcca agaggaaaag
 1680
 gtctctgagg atgacatgga ccaggacttc ctacatttgt ttaagatagt ggcaggagag
 1740
 ggcaaggaga taggggtgta tgagctccag aggtgctca acaggatggc catcaaattc
 1800
 aaaaagcttca agaccaaggg ctttggcctg gatgcttgcc gctgcatgat caacctcatg
 1860
 gataaagatg gctctggcaa gctggggctt ctagagttca agatcctgtg gaaaaaactc
 1920
 aagaaatgga tggacatctt cagagagtgt gaccaggacc attcaggcac cttgaactcc
 1980
 tatgagatgc gcctggttat tgagaaagca ggcataagc tgaacaacaa ggtaatgcag
 2040
 gtcctggtgg ccaggatatgc agatgatggc ctgatcatag actttgacag cttcatcagc
 2100
 tgtttctga ggctaaagac catgttcaca ttctttctaa ccatggaccc caagaatact
 2160
 ggccatattt gcttgagcct ggaacagtgg ctgcagatga ccatgtgggg atagaggcgc
 2220
 tgtaggagcc tggatcatctc taccagcagc agcagcagcg aggttctagc ccaggagggg
 2280
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<210> 930

<211> 702

<212> PRT

<213> Homo sapiens

<400> 930

Met Val Ala His Ile Asn Asn Ser Arg Leu Lys Ala Lys Gly Val Gly
 1 5 10 15
 Gln His Asp Asn Ala Gln Asn Phe Gly Asn Gln Ser Phe Glu Glu Leu
 20 25 30
 Arg Ala Ala Cys Leu Arg Lys Gly Glu Leu Phe Glu Asp Pro Leu Phe

928

465 470 475 480
 Glu Tyr Ile Ile Ile Pro Ser Thr Phe Glu Pro His Arg Asp Ala Asp
 485 490 495
 Phe Leu Leu Arg Val Phe Thr Glu Lys His Ser Glu Ser Trp Glu Leu
 500 505 510
 Asp Glu Val Asn Tyr Ala Glu Gln Leu Gln Glu Lys Val Ser Glu
 515 520 525
 Asp Asp Met Asp Gln Asp Phe Leu His Leu Phe Lys Ile Val Ala Gly
 530 535 540
 Glu Gly Lys Glu Ile Gly Val Tyr Glu Leu Gln Arg Leu Leu Asn Arg
 545 550 555 560
 Met Ala Ile Lys Phe Lys Ser Phe Lys Thr Lys Gly Phe Gly Leu Asp
 565 570 575
 Ala Cys Arg Cys Met Ile Asn Leu Met Asp Lys Asp Gly Ser Gly Lys
 580 585 590
 Leu Gly Leu Leu Glu Phe Lys Ile Leu Trp Lys Lys Leu Lys Lys Trp
 595 600 605
 Met Asp Ile Phe Arg Glu Cys Asp Gln Asp His Ser Gly Thr Leu Asn
 610 615 620
 Ser Tyr Glu Met Arg Leu Val Ile Glu Lys Ala Gly Ile Lys Leu Asn
 625 630 635 640
 Asn Lys Val Met Gln Val Leu Val Ala Arg Tyr Ala Asp Asp Gly Leu
 645 650 655
 Ile Ile Asp Phe Asp Ser Phe Ile Ser Cys Phe Leu Arg Leu Lys Thr
 660 665 670
 Met Phe Thr Phe Phe Leu Thr Met Asp Pro Lys Asn Thr Gly His Ile
 675 680 685
 Cys Leu Ser Leu Glu Gln Trp Leu Gln Met Thr Met Trp Gly
 690 695 700

<210> 931

<211> 297

<212> DNA

<213> Homo sapiens

<400> 931

tcggaagg agcctgacat gggccagaaa atcaatcccc atggtttccg tctcggtgtg
60

acgaccgatc acaagaccgc ctggtacgcc gagaagcagt acgccgagct cgtgggtgag
120

gatgtcaaga tccgagagtg gctccacaag aatctggagc gcgccggtct ttcgtccatc
180

gagatcgagc gtcgctccga gcgcgtgacc attttccttt acgccgctcg cccgggcatc
240

gttatcgggc gcaatggccg ggaggccgag cgcgtgcgtn ntgagctcga aaagctt
297

<210> 932

<211> 93

<212> PRT

<213> Homo sapiens

<400> 932

Met Gly Gln Lys Ile Asn Pro His Gly Phe Arg Leu Gly Val Thr Thr

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      1             5             10             15
Asp His Lys Thr Arg Trp Tyr Ala Glu Lys Gln Tyr Ala Glu Leu Val
      20             25             30
Gly Glu Asp Val Lys Ile Arg Glu Trp Leu His Lys Asn Leu Glu Arg
      35             40             45
Ala Gly Leu Ser Ser Ile Glu Ile Glu Arg Arg Ser Glu Arg Val Thr
      50             55             60
Ile Phe Leu Tyr Ala Ala Arg Pro Gly Ile Val Ile Gly Arg Asn Gly
      65             70             75             80
Arg Glu Ala Glu Arg Val Arg Xaa Glu Leu Glu Lys Leu
      85             90

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<210> 933
 <211> 305
 <212> DNA
 <213> Homo sapiens

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<400> 933
nnacgcgtcg ccaagctgtt gatggccgaa tacaaggggc tcaacgtcat cgtcaaaacc
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tccgccgac cggcaagcca agccaatgcc gtgcaggatc tggcgggggc aggcacgac
120
gcgctggcca tcctgccgac cgacccggat cagctggttt cggcgatcca gcaggtcaag
180
gacgacggca agttcgtggc gctggtcgac cgtgcgctt ccgtcaacga caacacgac
240
cgcgatctct acgtggccgg caacaaccgg gcgctcggcg aagtggcggg caaattcatg
300
ggcga
305

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<210> 934
 <211> 101
 <212> PRT
 <213> Homo sapiens

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<400> 934
Xaa Arg Val Ala Lys Leu Leu Met Ala Glu Tyr Lys Gly Leu Asn Val
1             5             10             15
Ile Val Lys Thr Ser Ala Asp Pro Ala Ser Gln Ala Asn Ala Val Gln
      20             25             30
Asp Leu Ala Gly Ala Gly Ile Asp Ala Leu Ala Ile Leu Pro Thr Asp
      35             40             45
Pro Asp Gln Leu Val Ser Ala Ile Gln Gln Val Lys Asp Asp Gly Lys
      50             55             60
Phe Val Ala Leu Val Asp Arg Ala Pro Ser Val Asn Asp Asn Thr Ile
      65             70             75             80
Arg Asp Leu Tyr Val Ala Gly Asn Asn Pro Ala Leu Gly Glu Val Ala
      85             90             95
Gly Lys Phe Met Gly
      100

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<210> 935
 <211> 333

<212> DNA

<213> Homo sapiens

<400> 935

acgcgtgaag ggctgatgag tgctatgaaa aagccagggg cccgaggaca ctgggggtgga
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caggctcccc tggggaagtc ctcttagaac tgagggatca acactggagg agactgcaag
120
gggtacggga taaatgttcc tggatgaagga aacagcaggg gcaaaggccc tgcagcagaa
180
aggagcgagg ccctttggag taacagaaaag accatggtga caggagctca gaaagaccac
240
tggtgttaag actataagcc agtggaggcc agattgggga atgggatggg aggggtgctt
300
gaagaccatg gtgaggctct cttggtcttt act
333

<210> 936

<211> 103

<212> PRT

<213> Homo sapiens

<400> 936

Met	Val	Phe	Lys	His	Pro	Ser	His	Pro	Ile	Pro	Gln	Ser	Gly	Leu	His
1			5					10					15		
Trp	Leu	Ile	Val	Leu	Thr	Pro	Val	Val	Phe	Leu	Ser	Ser	Cys	His	His
		20					25					30			
Gly	Leu	Ser	Val	Thr	Pro	Lys	Gly	Leu	Ala	Pro	Phe	Cys	Cys	Arg	Ala
	35					40					45				
Phe	Ala	Pro	Ala	Val	Ser	Phe	Thr	Arg	Asn	Ile	Tyr	Pro	Val	Pro	Leu
	50				55					60					
Ala	Val	Ser	Ser	Ser	Val	Asp	Pro	Ser	Val	Leu	Arg	Gly	Leu	Pro	Gln
65				70					75				80		
Gly	Ser	Leu	Ser	Thr	Pro	Val	Ser	Ser	Gly	Pro	Trp	Leu	Phe	His	Ser
		85					90						95		
Thr	His	Gln	Pro	Phe	Thr	Arg									
															100

<210> 937

<211> 464

<212> DNA

<213> Homo sapiens

<400> 937

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ccggcgagac acgagctcaa ggatctgttg acggccgacc tcatggacca gcacaacctc
120
gaccgtgccc tggcaggggt gcgtgccagt cacgtcatcg acgaagctcg cgccgaggtg
180
cagcggcgctg ccgatctcgc ccgtggccat ctgcctatcc ttcccgagg cgatgcccgt
240
acggcggttg agaccctgtg cgacgaggtg gggtcccgagg cggcctgaac cccgaccctg
300

ccagnctgcg tcccatctcc tggccgggaac cgctccagcg tctgctctct gacagctcat
 360
 cgttcttccg acaccaagga gtttctcgtg gcccgtcac tcgatctcat cggcattggg
 420
 cccggcaacc cggactggat caccctggct gccgtcaagg ccan
 464

<210> 938

<211> 95

<212> PRT

<213> Homo sapiens

<400> 938

Xaa	Leu	Ser	Ala	Glu	Gly	Val	Ala	Thr	Leu	Pro	Thr	Leu	Met	Leu	Gln
1				5				10					15		
Ala	Ser	Thr	Asp	Pro	Ala	Asp	Asp	Glu	Leu	Lys	Asp	Leu	Leu	Thr	Ala
		20					25					30			
Asp	Leu	Met	Asp	Gln	His	Asn	Leu	Asp	Arg	Ala	Leu	Ala	Gly	Leu	Arg
	35					40					45				
Ala	Ser	His	Val	Ile	Asp	Glu	Ala	Arg	Ala	Glu	Val	Gln	Arg	Arg	Ala
	50				55					60					
Asp	Leu	Ala	Arg	Gly	His	Leu	Ala	Ile	Leu	Pro	Ala	Gly	Asp	Ala	Arg
65				70				75					80		
Thr	Ala	Leu	Glu	Thr	Leu	Cys	Asp	Glu	Val	Gly	Ser	Arg	Ala	Ala	
			85					90					95		

<210> 939

<211> 385

<212> DNA

<213> Homo sapiens

<400> 939

ntgactatcc tcgaccccca tggtcaggag acgactccag gaagtgtcat cgaagggcctt
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 ggactgctgc cggtcgaggt ggacttcgcc gccacgaaga cccttgccctt gtcgcacggg
 120
 acatggcggg ggatcgaggt tgggtggctat gaaatccatc acgggcgctct gtcgttcgct
 180
 gaggacgctg aagccttcct cgacggcgta cacgtcggtc cggtatgggg gacgatgtgg
 240
 cacggggcat tcgagcacga cgaattccgt cgcacgtggc tggctgacgc ggcccgtcac
 300
 gctggatcat cctggcgctcc gcactccgac gagctggggtt atcaggctcg acgcgaggcg
 360
 atgategaaa ccctcgccga cgcgt
 385

<210> 940

<211> 128

<212> PRT

<213> Homo sapiens

<400> 940

Xaa Thr Ile Leu Asp Pro Asp Gly Gln Glu Thr Thr Pro Gly Ser Val

```

      1           5           10           15
Ile Glu Gly Leu Gly Leu Leu Pro Val Glu Val Asp Phe Ala Ala Thr
      20           25           30
Lys Thr Leu Ala Leu Ser His Gly Thr Trp Arg Gly Ile Glu Val Gly
      35           40           45
Gly Tyr Glu Ile His His Gly Arg Leu Ser Phe Ala Glu Asp Ala Glu
      50           55           60
Ala Phe Leu Asp Gly Val His Val Gly Pro Val Trp Gly Thr Met Trp
      65           70           75           80
His Gly Ala Phe Glu His Asp Glu Phe Arg Arg Thr Trp Leu Ala Asp
      85           90           95
Ala Ala Arg His Ala Gly Ser Ser Trp Arg Pro His Ser Asp Glu Leu
      100          105          110
Gly Tyr Gln Ala Arg Arg Glu Ala Met Ile Glu Thr Leu Ala Asp Ala
      115          120          125

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<210> 941
 <211> 348
 <212> DNA
 <213> Homo sapiens

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<400> 941
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gaagccatgc aaaccatggt cgtgctggcc gggctgccgt tctcggtggt gctgattttc
120
ttcatgttcg gtttgacaaa ggcgatgcgc caggacgtgg ccatggagca ggagcaggca
180
caattggctg aacgtggctg ccgtggtttc agcgagcgcc tgaccgcgct ggacctgcaa
240
ccgagccagg gcaccgtgca acgctttatg gacaaacatg tgacgccggc gttggaacaa
300
gcggcgactg cgttgcgtga tcaagggtg gaagtgcaga ccctgctt
348

```

<210> 942
 <211> 116
 <212> PRT
 <213> Homo sapiens

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<400> 942
Ile Phe Trp Ser Ala Val Ile Thr Leu Val Thr Ile Gly Leu Leu Phe
  1           5           10           15
Ala Gly Asn Phe Glu Ala Met Gln Thr Met Val Val Leu Ala Gly Leu
      20           25           30
Pro Phe Ser Val Val Leu Ile Phe Phe Met Phe Gly Leu His Lys Ala
      35           40           45
Met Arg Gln Asp Val Ala Met Glu Gln Glu Gln Ala Gln Leu Ala Glu
      50           55           60
Arg Gly Arg Arg Gly Phe Ser Glu Arg Leu Thr Ala Leu Asp Leu Gln
      65           70           75           80
Pro Ser Gln Gly Thr Val Gln Arg Phe Met Asp Lys His Val Thr Pro
      85           90           95
Ala Leu Glu Gln Ala Ala Thr Ala Leu Arg Asp Gln Gly Leu Glu Val

```

100
Gln Thr Leu Leu
115

105

110

<210> 943
<211> 439
<212> DNA
<213> Homo sapiens

<400> 943
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60
ctcctctaataat gcatcctggg ctcttgctaa cctgtggga aacaccgtct cttctctcct
120
ttgccctctt ctgtgatcac atcctcactt ctgagcctat ctgcccattcc agtcaatccc
180
ccttggttct gggatgctat ttcctggcc gcctccctct aggagtgttt agaaccctca
240
ctgtgggcag aaggaggga agatggctga ggtacctgga aagggacgtg tggatccccg
300
ggcatggaag gaaggaggca ggagagctag aaaaagggat gagatctaata gttccctaag
360
gaacctggct tagtgctggc cttcacata ctgagacatg gaatccttac tactgttctc
420
tgaggaaaga ggctgttcc
439

<210> 944
<211> 118
<212> PRT
<213> Homo sapiens

<400> 944
Met Ala Gly Ala Glu Gln Ile Glu Gln Asp Leu Val Ser Phe Ser Leu
1 5 10 15
His Phe Val Pro Pro Leu Met His Pro Gly Leu Leu Leu Thr Leu Trp
20 25 30
Glu Thr Pro Ser Leu Leu Ser Phe Ala Leu Phe Cys Asp His Ile Leu
35 40 45
Thr Ser Glu Pro Ile Cys Pro Ser Ser Gln Ser Pro Leu Val Leu Gly
50 55 60
Cys Tyr Phe Pro Gly Arg Leu Pro Leu Gly Val Phe Arg Thr Leu Thr
65 70 75 80
Val Gly Arg Arg Glu Gly Arg Trp Leu Arg Tyr Leu Glu Arg Asp Val
85 90 95
Trp Ile Pro Gly His Gly Arg Lys Glu Ala Gly Glu Leu Glu Lys Gly
100 105 110
Met Arg Ser Asn Val Pro
115

<210> 945
<211> 339
<212> DNA
<213> Homo sapiens

<400> 945
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 gagatgggtga tatatatata tactcacaca catatatatg tgtgtgtgtg tatatatgta
 120
 tatatatata gcgtgtacaa caaaacatgc actggttact cagcaccctg tgtttgtctc
 180
 agcaatagct tttctaaaga actgctacta tttgaaatgg agggggaggg gggctcctgga
 240
 cagagtattg tgcaagtga aagtctctgg atggggctat gtatataccta ccagccaatt
 300
 tgggtgcaaa ttggatttga aggcctgcct ctgtccacn
 339

<210> 946
 <211> 113
 <212> PRT
 <213> Homo sapiens

<400> 946
 Xaa Ile Arg Glu Ala Phe His Ile Phe Phe Leu Leu Ile Ile Ser Ile
 1 5 10 15
 Ala Leu Tyr Val Glu Met Val Ile Tyr Ile Tyr Thr His Thr His Ile
 20 25 30
 Tyr Val Cys Val Cys Ile Tyr Val Tyr Ile Tyr Ser Val Tyr Asn Lys
 35 40 45
 Thr Cys Thr Val Tyr Ser Ala Pro Arg Val Cys Leu Ser Asn Ser Phe
 50 55 60
 Ser Lys Glu Leu Leu Leu Phe Glu Met Glu Gly Glu Gly Gly Pro Gly
 65 70 75 80
 Gln Ser Ile Val Gln Val Glu Ser Leu Trp Met Gly Leu Cys Ile Ser
 85 90 95
 Tyr Gln Pro Ile Trp Val Gln Ile Gly Phe Glu Gly Leu Pro Leu Ser
 100 105 110
 Thr

<210> 947
 <211> 648
 <212> DNA
 <213> Homo sapiens

<400> 947
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 120
 agtagtctg cgggtcctca cgatgcctca gcctttctgc tgtgtgcgaa gctttgcaga
 180
 ggagatgatg cttcaaagtt gtccctgttg gggatgagca gccaggcctt tatacactgg
 240
 gacagtcagt catggatagc tggatactct ggaaaccctc atccctggag gtctgagccc
 300

ctggatacca tgcccttctt aggctggagt tgctgccctt gtccatttac cataaaaatt
 360
 ggacaagaga ataccaggac acacctgagt ttctcatcgt atgctaaacc tgttcttcca
 420
 cgtacatccc caatgtgtac agccctactt tttctgctg atcaagttca attacttctg
 480
 ctaagatggg gactattctt gcctgctggg ccttggatgc aaggaccca atgttcaggc
 540
 agcctttggg gccttctagc atacgaatca gagcattatc tttaggtgtg gaataagctg
 600
 ccccaaaaacc tgttgaagcc agccaggcac tgtgctccct tcacgcgt
 648

<210> 948
 <211> 154
 <212> PRT
 <213> Homo sapiens

<400> 948
 Met Glu Met Ser Gly Gln Gln Val Tyr Gly Val Leu Val Ala Ser His
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 Leu Cys Thr Gly Val Gly Lys Glu Trp Thr Gly Val Asp Lys Ser Ser
 20 25 30
 Ser Ala Ala Gly Ser Ser Asp Ala Ser Ala Phe Leu Leu Cys Ala Lys
 35 40 45
 Leu Cys Arg Gly Asp Asp Ala Ser Lys Leu Ser Leu Leu Gly Met Ser
 50 55 60
 Ser Gln Ala Phe Ile His Trp Asp Ser Gln Ser Trp Ile Arg Gly Tyr
 65 70 75 80
 Ser Gly Asn Pro His Pro Trp Arg Ser Glu Pro Leu Asp Thr Met Pro
 85 90 95
 Phe Leu Gly Trp Ser Cys Cys Pro Cys Pro Phe Thr Ile Lys Ile Gly
 100 105 110
 Gln Glu Asn Thr Arg Thr His Leu Ser Phe Ser Ser Tyr Ala Lys Pro
 115 120 125
 Val Leu Pro Arg Thr Ser Pro Met Cys Thr Ala Leu Leu Phe Ser Ala
 130 135 140
 Asp Gln Val Gln Leu Leu Leu Leu Arg Trp
 145 150

<210> 949
 <211> 661
 <212> DNA
 <213> Homo sapiens

<400> 949
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 aagtaatgtg gaattttatc acagtgggtc agaaggcttc agggatagca cagatccaag
 120
 atatgctgta acgtttctta acctaggaca gattcaagaa catggctcat cttatattcg
 180
 aggctgtgct tttcaccatg gcttctctcc agcaattggg gtatttggga cagatggatt
 240

ggacatagat gacaacatca ttcactttac agtgggggaa ggcataagaa tatgggggaa
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 tgccaaccga gtccgagga atttgattgc actttcggtt tggccaggaa cctatcagaa
 360
 cagaaaagat ttaagttcaa ctctctggca tgcagcaatt gagataaata gagggaccaa
 420
 tacagtttta cagaataatg tagtggctgg atttgaaga gcaggatacc gcattgatgg
 480
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 c
 661

<210> 950
 <211> 210
 <212> PRT
 <213> Homo sapiens

<400> 950
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 His Ser Gly Gln Glu Gly Phe Arg Asp Ser Thr Asp Pro Arg Tyr Ala
 20 25 30
 Val Thr Phe Leu Asn Leu Gly Gln Ile Gln Glu His Gly Ser Ser Tyr
 35 40 45
 Ile Arg Gly Cys Ala Phe His His Gly Phe Ser Pro Ala Ile Gly Val
 50 55 60
 Phe Gly Thr Asp Gly Leu Asp Ile Asp Asp Asn Ile Ile His Phe Thr
 65 70 75 80
 Val Gly Glu Gly Ile Arg Ile Trp Gly Asn Ala Asn Arg Val Arg Gly
 85 90 95
 Asn Leu Ile Ala Leu Ser Val Trp Pro Gly Thr Tyr Gln Asn Arg Lys
 100 105 110
 Asp Leu Ser Ser Thr Leu Trp His Ala Ala Ile Glu Ile Asn Arg Gly
 115 120 125
 Thr Asn Thr Val Leu Gln Asn Asn Val Val Ala Gly Phe Gly Arg Ala
 130 135 140
 Gly Tyr Arg Ile Asp Gly Glu Pro Cys Pro Gly Gln Phe Asn Pro Val
 145 150 155 160
 Glu Lys Trp Phe Asp Asn Glu Ala His Gly Gly Leu Tyr Gly Ile Tyr
 165 170 175
 Met Asn Gln Asp Gly Leu Pro Gly Cys Ser Leu Ile Gln Gly Phe Thr
 180 185 190
 Ile Trp Thr Cys Trp Asp Tyr Gly Ile Tyr Phe Gln Thr Thr Glu Ser
 195 200 205
 Val His
 210

<210> 951
 <211> 2615

<212> DNA

<213> Homo sapiens

<400> 951

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120
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240
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660
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780
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900
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960
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 1620
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 1680
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 1740
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 1920
 gggcacattg gttccagcct agccagtttc tcaccctggg ttgggggtccc ccagcatcca
 1980
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 gcagttcttg agcctcatct ggctgggac tcgaaggggc ctcctggatt cagtccccac
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 2280
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 2340
 aagggtgcat ttgttcactt ttgtaatatt gtcctgggccc tgtgttgggg tggtggggga
 2400
 agctgggcat cagtggccac atgggcatca ggggctggcc ccacagagac cccacagggc
 2460
 agtgagctct gtcttcccc acctgcctag cccatcatct atctaaccgg tccttgattt
 2520
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 2580
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<210> 952

<211> 357

<212> PRT

<213> Homo sapiens

<400> 952

Xaa	Pro	Ala	Pro	Thr	Met	Pro	Trp	Pro	Leu	Leu	Leu	Leu	Leu	Ala	Val
1				5				10						15	
Ser	Gly	Ala	Gln	Thr	Thr	Arg	Pro	Cys	Phe	Pro	Gly	Cys	Gln	Cys	Glu
			20				25						30		
Val	Glu	Thr	Phe	Gly	Leu	Phe	Asp	Ser	Phe	Ser	Leu	Thr	Arg	Val	Asp
		35				40					45				
Cys	Ser	Gly	Leu	Gly	Pro	His	Ile	Met	Pro	Val	Pro	Ile	Pro	Leu	Asp
	50				55					60					
Thr	Ala	His	Leu	Asp	Leu	Ser	Ser	Asn	Arg	Leu	Glu	Met	Val	Asn	Glu

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65          70          75          80
Ser Val Leu Ala Gly Pro Gly Tyr Thr Thr Leu Ala Gly Leu Asp Leu
          85          90          95
Ser His Asn Leu Leu Thr Ser Ile Ser Pro Thr Ala Phe Ser Arg Leu
          100          105          110
Arg Tyr Leu Glu Ser Leu Asp Leu Ser His Asn Gly Leu Thr Ala Leu
          115          120          125
Pro Ala Glu Ser Phe Thr Ser Ser Pro Leu Ser Asp Val Asn Leu Ser
          130          135          140
His Asn Gln Leu Arg Glu Val Ser Val Ser Ala Phe Thr Thr His Ser
145          150          155          160
Gln Gly Arg Ala Leu His Val Asp Leu Ser His Asn Leu Ser Pro Pro
          165          170          175
Arg Ala Pro Pro His Glu Gly Arg Pro Ala Cys Ala His His Ser Glu
          180          185          190
Pro Glu Pro Gly Leu Glu Pro Ala Pro Cys Arg Ala Gln Pro Arg Asp
          195          200          205
Leu Pro Leu Arg Tyr Leu Ser Leu Asp Gly Asn Pro Leu Ala Val Ile
          210          215          220
Gly Pro Gly Ala Phe Ala Gly Leu Gly Gly Leu Thr His Leu Ser Leu
225          230          235          240
Ala Ser Leu Gln Arg Leu Pro Glu Leu Ala Pro Ser Gly Phe Arg Glu
          245          250          255
Leu Pro Gly Leu Gln Val Leu Asp Leu Ser Gly Asn Pro Lys Leu Asn
          260          265          270
Trp Ala Gly Ala Glu Val Phe Ser Gly Leu Ser Ser Leu Gln Glu Leu
          275          280          285
Asp Leu Ser Gly Thr Asn Leu Val Pro Leu Pro Glu Ala Leu Leu Leu
          290          295          300
His Leu Pro Ala Leu Gln Ser Val Ser Val Gly Gln Asp Val Arg Cys
305          310          315          320
Arg Arg Leu Val Arg Glu Gly Thr Tyr Pro Arg Arg Pro Gly Ser Ser
          325          330          335
Pro Lys Val Ala Leu His Cys Val Asp Thr Arg Glu Ser Ala Ala Arg
          340          345          350
Gly Pro Thr Ile Leu
          355

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<210> 953

<211> 347

<212> DNA

<213> Homo sapiens

<400> 953

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accacacttt ccccatccct tgatccatca ttgggcgttg aggttttccc atgtcttgac
120
tgtgtacct ggcggtctg cgagtaacc gctgcggaca cacagtagga cgggagggag
180
aagccattgc gtttcaccct ttcattggccc ttcctttccc cttccaagtg agctctttga
240
ggtagtcat ggagggcagt gtccctctgc atcctgtctg gggttgtcaa atatggccaa
300

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gtgggctcca tcggggcagc ggggtggggtg ggggggtgtct gtcagag
347

<210> 954
<211> 103
<212> PRT
<213> Homo sapiens

<400> 954
Met Glu Pro Thr Trp Pro Tyr Leu Thr Thr Pro Asp Arg Met Gln Arg
1 5 10 15
Asp Thr Ala Leu His Asp Ser Pro Gln Arg Ala His Leu Glu Gly Glu
20 25 30
Arg Lys Gly His Glu Arg Val Lys Arg Asn Gly Phe Ser Leu Pro Ser
35 40 45
Tyr Cys Val Ser Ala Ala Val Thr Pro Gln Ser Arg Gln Val Gln Gln
50 55 60
Ser Arg His Gly Lys Thr Ser Thr Pro Asn Asp Gly Ser Arg Asp Gly
65 70 75 80
Glu Ser Val Val His Thr Leu Arg Gly Asp Pro Arg Glu Thr Gly Leu
85 90 95
Arg Thr Gly Met Ala Ser Arg
100

<210> 955
<211> 634
<212> DNA
<213> Homo sapiens

<400> 955
acgcgtgaag ggctctgcag gtgagcggct ctgcaggtga agggttctgc aggtgagcgg
60
ctctgcaggt gaatggttct gcaggtgaag ggctctgcag gtgaacgggt ctgcaggtga
120
agggctctgc aggtgaacgg ttctgcaggt gageggctct gcaggtgagc ggctctgcat
180
gtgagtgcct ctgtgactgg ctgcgaagca gcatttgtgc acacttgact ggccacaaca
240
gaatgttctt ctctgttctc agcactgagg aggaagctcc tgccaaagcg accacagcca
300
ggcaccgct ccatggagac attgctctct ccagactcca ttcagactca ggaaacctga
360
gctcttgga tgcaggctga ggcagctccc acacaaaagc tatctactct ggcagttatc
420
agaggcctcc gttgcacaaa tcacacacct actgtgcttg acgtggctgg gcctccagca
480
ggacccgctc ctgagaacac acgggtgcta gtccaagttc acagcacggc tcaagtcact
540
cccacaaacc tctctataca aacacacaaa gctctgggag gctaccctgc atccaagagt
600
caccatctca cacctggaac aagggttacg gccg
634

<210> 956

<211> 113
 <212> PRT
 <213> Homo sapiens

<400> 956
 Met Glu Ser Gly Glu Ser Asn Val Ser Met Glu Arg Val Pro Gly Cys
 1 5 10 15
 Gly Arg Leu Gly Arg Ser Phe Leu Leu Ser Ala Asp Asn Arg Glu Glu
 20 25 30
 His Ser Val Val Ala Ser Gln Val Cys Thr Asn Ala Ala Cys Glu Pro
 35 40 45
 Val Thr Glu Ala Leu Thr Cys Arg Ala Ala His Leu Gln Ser Arg Ser
 50 55 60
 Pro Ala Glu Pro Phe Thr Cys Arg Ala Leu His Leu Gln Asn Arg Ser
 65 70 75 80
 Pro Ala Glu Pro Phe Thr Cys Arg Thr Ile His Leu Gln Ser Arg Ser
 85 90 95
 Pro Ala Glu Pro Phe Thr Cys Arg Ala Ala His Leu Gln Ser Pro Ser
 100 105 110
 Arg

<210> 957
 <211> 823
 <212> DNA
 <213> Homo sapiens

<400> 957
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 120
 gtacctcctg gccaccacgc actgcgcagc cgtggtgtcc agcctcctgg gcagccccct
 180
 gcccttggaac aggtaccacg ctcagactcc aggcttaggg gtccctctgg aatgatgctc
 240
 cccctggaat gatgtcccc gagccctcca cccggctctg caccocgact ttctgcatga
 300
 gttcccatgg ctgtaggcca cgtgggacag aaagtacat ggagccaggc cccagtctct
 360
 caggtaacca cggggacctc tcctctccag gcgttttggg atcctcactg gtcctcgggtg
 420
 gccctgcaca gcacccccac agggaaagctg ctgtttctgc cttcctctaa ggtcccaaaa
 480
 ctgcctggct gctctgttgg cccaggtc cagcacacac tggaggctgc cctcaccct
 540
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 600
 agcagacccc tgggaactgc ctgatctgag cccctcagg agcccaagga caacctgtc
 660
 tgtaccatac atcactatgt cttcccaagc tcacacctcc cagctcccag caaagggcag
 720
 ggcgtgtcta ccaccacca gccactggg gtcccccttc ctgcggagg cctccggagc
 780

atgggtctgc tggcccttcc tttctttgcc tcttagtctg gaa
823

<210> 958
<211> 105
<212> PRT
<213> Homo sapiens

<400> 958
Met Ala Val Gly His Val Gly Gln Lys Val Thr Trp Ser Gln Ala Pro
1 5 10 15
Val Ser Gln Val Pro Thr Gly Thr Ser Pro Leu Gln Ala Phe Trp Asp
20 25 30
Pro His Trp Leu Arg Trp Ala Leu His Ser Thr Pro Thr Gly Lys Leu
35 40 45
Leu Phe Leu Pro Ser Ser Lys Val Pro Lys Leu Pro Gly Cys Ser Val
50 55 60
Gly Pro Arg Leu Gln His Thr Leu Glu Ala Ala Pro His Pro Val Ser
65 70 75 80
Trp Phe Arg Leu Leu Gln Ala Leu Ser Ser Ala Gly His Pro Leu Leu
85 90 95
Pro Val Ser Arg Pro Leu Gly Thr Ala
100 105

<210> 959
<211> 586
<212> DNA
<213> Homo sapiens

<400> 959
ngtcatgact gcatggccaa gcatgactcc aacacccatca ttaagtttgc cgacgacaca
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acagtggtag gcctgatcac cgacaacgat gaggcagcct atagggagga ggtcagagac
120
ctggcagtgt ggtgccagga taacaacctc tccctcaacg tgatcaagac cacgaagatg
180
atcgtggact acaggaaaag gagggctcgag cagcggccca ttctcattga tggggctgta
240
tgaggagccag ttgagagctt caagttcctt ggtgtccaca tcaccatcga actatcatgg
300
tccaaacaca ccaagacagt agtgaagagg gtgcgacaat gcctattcca cctcggtaga
360
caaaaaagat ttggaatgga tcctcagacc ctcaaaaagt ttgacatcta caccatcgag
420
agcatcatga ctggttgcac caccgcctgg tatggcaact gctcggcctc cgaccgcaag
480
gcactacaga gggtagtgcg tacggcccag tacatcactg gggctaagct tcctgccatc
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caggacctct ataccaggcg gtgtcagcgg aagaccctga caattg
586

<210> 960
<211> 195
<212> PRT

<213> Homo sapiens

<400> 960

Xaa His Asp Cys Met Ala Lys His Asp Ser Asn Thr Ile Ile Lys Phe
 1 5 10 15
 Ala Asp Asp Thr Thr Val Val Gly Leu Ile Thr Asp Asn Asp Glu Ala
 20 25 30
 Ala Tyr Arg Glu Glu Val Arg Asp Leu Ala Val Trp Cys Gln Asp Asn
 35 40 45
 Asn Leu Ser Leu Asn Val Ile Lys Thr Thr Lys Met Ile Val Asp Tyr
 50 55 60
 Arg Lys Arg Arg Val Glu His Ala Pro Ile Leu Ile Asp Gly Ala Val
 65 70 75 80
 Trp Glu Pro Val Glu Ser Phe Lys Phe Leu Gly Val His Ile Thr Ile
 85 90 95
 Glu Leu Ser Trp Ser Lys His Thr Lys Thr Val Val Lys Arg Val Arg
 100 105 110
 Gln Cys Leu Phe His Leu Gly Arg Gln Lys Arg Phe Gly Met Asp Pro
 115 120 125
 Gln Thr Leu Lys Lys Phe Asp Ile Tyr Thr Ile Glu Ser Ile Met Thr
 130 135 140
 Gly Cys Ile Thr Ala Trp Tyr Gly Asn Cys Ser Ala Ser Asp Arg Lys
 145 150 155 160
 Ala Leu Gln Arg Val Val Arg Thr Ala Gln Tyr Ile Thr Gly Ala Lys
 165 170 175
 Leu Pro Ala Ile Gln Asp Leu Tyr Thr Arg Arg Cys Gln Arg Lys Thr
 180 185 190
 Leu Thr Ile
 195

<210> 961

<211> 502

<212> DNA

<213> Homo sapiens

<400> 961

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 120
 taaactgtat agtaacctgc taaccagtgc gaaagagcta ccaccaatg gagatactaa
 180
 atccatggta atggaccatc gagggcaacc tccagagttg gctgctcttc ccactcctga
 240
 gtctacaccc gtgcttcacc agaagaccct gcaggccatg aagagccact cagaaaaggc
 300
 ccatggccat ggagcttcaa ggaaagaaac ccctcagttt tttccgtcta gtccgccacc
 360
 tcattcccca ataagtcatg ggcatacccc cagtgccatt gttcttccaa atgctaccca
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 480
 cattgatcac cccttcacgc gt
 502


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<400> 963
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gcgctctaga ggagatgaat tatggatccg ccctcccgga atcctggctc ggccctcccc
120
acgccacca gggccagtcg ggtctgctca cagcccagg aggccgcgtg tccagccgcg
180
ggcaagagac agagcaggtc cctgtgtatc caagtccctg agcccgtgac accggcccca
240
ggccctgtag agagccagca gccaccatgg cgaaggagga agatgaggag aagaaaacca
300
agaaagggaa gaaggggaag aaggcaccgg acccgagaa gcccaaacgg agcctgaagg
360
ggacgtcgcg ggtgttcatt ggcttcgcg accgaacacc caagatctac aagaagggcc
420
agttccgcag cgctcggcc ttcttctggg gcctccacac cggccccac aagaccaagc
480
gcacgaggaa ggcccgacc gtgctcgggt acacgtcaga gcttatgacg cacatgcgca
540
tgggcaagaa gaagcgggcg atgaagggca agaagccgtc ctcatggtg atccgcttcc
600
caggccgccc tggctacggc cgctcggc cgcgcgccc gtcactcagc aaagcgtcca
660
cgccatcaa ctggctcaca aaaaagttcc tcctcaagaa ggccgaggag tcgggcagcg
720
aacaggccac agtggacgcc tggctgcagc gctcgagctc ccgcatgggc tcccgaaaac
780

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tccccctccc gtcgggtgcc gagatcctgc ggcctggggg ccggctccgg aggttcccc
 840
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 900
 cccattcca tcactcgggc tcccgcaagt cgctgtacgg gcttgagggc ttccaggacc
 960
 tgggcgagta ttatgactat caccgcgacg gcgacgacta ctacgaccgg cagtcaactcc
 1020
 accgctacga ggagcaggaa ccctacctgg cgggcctcgg ccctacagc ccggcctggc
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 1140
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 1200
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 1260
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 1298

<210> 964

<211> 235

<212> PRT

<213> Homo sapiens

<400> 964

Ser	Ala	Ser	Gln	Ala	Ala	Val	Ala	Thr	Ala	Ala	Cys	Gly	Arg	Ala	Pro
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Gly	His	Ser	Ala	Lys	Arg	Pro	Arg	Pro	Ser	Thr	Gly	Ser	Gln	Lys	Ser
			20					25					30		
Ser	Ser	Ser	Arg	Arg	Pro	Arg	Ser	Arg	Ala	Ala	Asn	Arg	Pro	Gln	Trp
			35				40					45			
Thr	Pro	Gly	Cys	Ser	Ala	Arg	Ala	Pro	Ala	Trp	Ala	Pro	Ala	Asn	Ser
			50				55					60			
Pro	Ser	Arg	Arg	Val	Pro	Arg	Ser	Cys	Gly	Leu	Gly	Ala	Gly	Ser	Gly
65				70						75				80	
Gly	Ser	Pro	Ala	Ala	Ala	Ala	Ser	Thr	Arg	Gln	Ala	Ser	Pro	Trp	Ala
			85					90						95	
Ser	Cys	Pro	Ser	Arg	Thr	Arg	Pro	His	Ser	Ile	Thr	Arg	Ala	Pro	Ala
			100					105					110		
Ser	Arg	Cys	Thr	Gly	Leu	Arg	Ala	Ser	Arg	Thr	Trp	Ala	Ser	Ile	Met
			115				120					125			
Thr	Ile	Thr	Ala	Thr	Ala	Thr	Thr	Thr	Thr	Gly	Ser	His	Ser	Thr	
			130				135				140				
Ala	Thr	Arg	Ser	Arg	Asn	Pro	Thr	Trp	Arg	Ala	Ser	Ala	Pro	Thr	Ala
145				150						155				160	
Arg	Pro	Gly	His	Pro	Thr	Ala	Thr	Thr	Thr	Gly	Thr	Arg	Pro	Arg	
			165					170					175		
Ile	Pro	Thr	Thr	Thr	Thr	Thr	Pro	Thr	Ile	Thr	Val	Ala	Pro	Leu	Ile
			180					185					190		
Arg	Gly	Thr	Pro	Thr	Ala	Thr	Ala	Thr	Thr	Ile	Thr	Asn	Pro	His	Met
			195				200					205			
Arg	Pro	Arg	Arg	Gly	Thr	Arg	Leu	Leu	Thr	Ala	Thr	Thr	Met	Gly	Thr
			210				215					220			
Arg	Ala	Arg	Arg	Thr	Leu	Met	Ala	Thr	Thr	Trp					

947

cgggttcgcc agccaaatgg cgttcgaggc tccagcatcc agtccggtgc cttcggcacc
 240
 cccgcactgc gcagagaggc cgccagaaac gatggcaccg gcggcgcggg aggtgataca
 300
 ggcgcttcgg ccggagcgct cacggactcc ggcactacag gtgcagcttg cgcttctctg
 360
 ggcggagcaa cagggtcact tcgaggcggg gat
 393

<210> 968

<211> 125

<212> PRT

<213> Homo sapiens

<400> 968

Pro	Ala	Arg	Ser	Asp	Thr	Glu	Leu	Val	Val	Ser	Thr	Asp	Ser	Gly	Ala
1				5					10					15	
Glu	Ala	Ser	Gly	Ser	Ser	Ser	Ala	Ser	Ala	Pro	Val	Gly	Thr	Glu	Glu
		20						25					30		
Ser	Pro	Ser	Ala	Ser	Ala	Ser	Ala	Ala	Ala	Trp	Ala	Ala	Pro	Asp	Ser
	35				40						45				
Ala	Gly	Gly	Thr	Phe	Ser	Arg	Val	Arg	Gln	Pro	Asn	Gly	Val	Ala	Gly
50					55					60					
Ser	Ser	Ile	Gln	Ser	Gly	Ala	Phe	Gly	Thr	Pro	Ala	Leu	Arg	Arg	Glu
65				70					75					80	
Ala	Ala	Arg	Asn	Asp	Gly	Thr	Gly	Gly	Ala	Gly	Gly	Asp	Thr	Gly	Ala
			85					90					95		
Ser	Ala	Gly	Ala	Leu	Thr	Asp	Ser	Gly	Thr	Thr	Gly	Ala	Ala	Cys	Ala
		100						105					110		
Ser	Cys	Gly	Gly	Ala	Thr	Gly	Ser	Leu	Arg	Gly	Gly	Asp			
	115							120				125			

<210> 969

<211> 880

<212> DNA

<213> Homo sapiens

<400> 969

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 120
 atgaattttc gagtaaaactt acatagaatg cctatgagac acaggaagaa ggcagcagac
 180
 aagaatctta ccctgccgtc tttagtatgt gaagtactgg acctgatggg agagttttat
 240
 gtaacacaca tgatgaagga gtttcctatg gatctctata tacgctgcat ccaggtagta
 300
 caaaaactgc tctgctacca gaagaagtgt cgggtacgcc tgcattacac ctggcgaggag
 360
 ctctgggtcag ccttgataaa tttgctgaag ttccttatgt caaatgagac tgtacttttg
 420
 gccaaacaca acattttttac attagccctt atgattgtga acctatttaa tatgtttatc
 480

acatatggcg acacatttct gccaaacccc agcagctatg atgaacttta ctatgagatt
 540
 atccgcatgc accagagctt tgacaacctc tactccatgg tcctgaggct ttctaccaat
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 660
 atcatcaacc actttaaccc caaaattgag tcctacgctg ctgtgaatca catatcccaa
 720
 ctgtcagagg agcagggtgct ggagggtggtg agagccaact atgacacgct cacgctgaag
 780
 ctgcaggatg gcctggacca gtatgagcgc tactcagagc agcacaagga agctgccttc
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 880

<210> 970

<211> 263

<212> PRT

<213> Homo sapiens

<400> 970

Met	Thr	Met	His	Phe	Cys	Met	Met	Ile	Asn	Met	Asn	Phe	Arg	Val	Asn
1				5					10					15	
Leu	His	Arg	Met	Pro	Met	Arg	His	Arg	Lys	Lys	Ala	Ala	Asp	Lys	Asn
			20					25					30		
Leu	Thr	Leu	Pro	Ser	Leu	Val	Cys	Glu	Val	Leu	Asp	Leu	Met	Val	Glu
		35					40					45			
Phe	Ile	Val	Thr	His	Met	Met	Lys	Glu	Phe	Pro	Met	Asp	Leu	Tyr	Ile
	50					55				60					
Arg	Cys	Ile	Gln	Val	Val	His	Lys	Leu	Leu	Cys	Tyr	Gln	Lys	Lys	Cys
65					70					75				80	
Arg	Val	Arg	Leu	His	Tyr	Thr	Trp	Arg	Glu	Leu	Trp	Ser	Ala	Leu	Ile
				85					90					95	
Asn	Leu	Leu	Lys	Phe	Leu	Met	Ser	Asn	Glu	Thr	Val	Leu	Leu	Ala	Lys
			100					105					110		
His	Asn	Ile	Phe	Thr	Leu	Ala	Leu	Met	Ile	Val	Asn	Leu	Phe	Asn	Met
		115					120					125			
Phe	Ile	Thr	Tyr	Gly	Asp	Thr	Phe	Leu	Pro	Thr	Pro	Ser	Ser	Tyr	Asp
	130					135					140				
Glu	Leu	Tyr	Tyr	Glu	Ile	Ile	Arg	Met	His	Gln	Ser	Phe	Asp	Asn	Leu
145					150					155				160	
Tyr	Ser	Met	Val	Leu	Arg	Leu	Ser	Thr	Asn	Ala	Gly	Gln	Trp	Lys	Glu
				165					170					175	
Ala	Ala	Ser	Lys	Val	Thr	His	Ala	Leu	Val	Asn	Ile	Arg	Ala	Ile	Ile
			180					185					190		
Asn	His	Phe	Asn	Pro	Lys	Ile	Glu	Ser	Tyr	Ala	Ala	Val	Asn	His	Ile
		195				200						205			
Ser	Gln	Leu	Ser	Glu	Glu	Gln	Val	Leu	Glu	Val	Val	Arg	Ala	Asn	Tyr
		210				215					220				
Asp	Thr	Leu	Thr	Leu	Lys	Leu	Gln	Asp	Gly	Leu	Asp	Gln	Tyr	Glu	Arg
225					230					235				240	
Tyr	Ser	Glu	Gln	His	Lys	Glu	Ala	Ala	Phe	Phe	Lys	Glu	Leu	Val	Arg
				245					250					255	
Ser	Ile	Ser	Thr	Asn	Val	Arg									

260

<210> 971
 <211> 337
 <212> DNA
 <213> Homo sapiens

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 120
 aatcccaacc ccaaatacct ggttggttaac ggagacgaat ccgaaccggg cacgtgcaag
 180
 gacatgccgc tcattatggc aagcccgac acgcttgctg aaggtgctct tatctccgc
 240
 tacgctttcg gatccgagca ggctttcatc tacctccgtg gagaagttgt tcaggtagcc
 300
 cggcgcttg aagaaaaaa aaaaatgcga nnnnnnn
 337

<210> 972
 <211> 112
 <212> PRT
 <213> Homo sapiens

<400> 972
 Ser Arg Gly Leu Thr Met Glu Pro Ser Glu Val Leu Asn Leu Ile Lys
 1 5 10 15
 Asp Ser Gly Leu Arg Gly Arg Gly Gly Ala Gly Phe Pro Thr Gly Val
 20 25 30
 Lys Trp Ser Phe Val Pro Gln Asn Asn Pro Asn Pro Lys Tyr Leu Val
 35 40 45
 Val Asn Gly Asp Glu Ser Glu Pro Gly Thr Cys Lys Asp Met Pro Leu
 50 55 60
 Ile Met Ala Ser Pro His Thr Leu Val Glu Gly Ala Leu Ile Ser Arg
 65 70 75 80
 Tyr Ala Phe Gly Ser Glu Gln Ala Phe Ile Tyr Leu Arg Gly Glu Val
 85 90 95
 Val Gln Val Ala Arg Arg Leu Glu Glu Lys Lys Lys Met Arg Xaa Xaa
 100 105 110

<210> 973
 <211> 360
 <212> DNA
 <213> Homo sapiens

<400> 973
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 ccagcagggc ggcacagcca aggaaatggc atggtcctgc tgcattggtc tcagtggggt
 120
 ccgggacctt ctgtatagga atcacttagg aaccagtcag accatcagat tctcaggacc
 180

cactggatca actgagtcag gaactcaggg ttttcaacac atcctccggg gggattccag
 240
 tggctgtgta actttgagga ccactggcaa agtggctctg gggtcagaga tccgagttca
 300
 tattctgggt ctgcctctga ctgactgcaa cggtagggcaa gtcacttgcc gtgcccagcc
 360

<210> 974

<211> 91

<212> PRT

<213> Homo sapiens

<400> 974

Met	Ala	Trp	Ser	Cys	Cys	Met	Val	Leu	Ser	Gly	Val	Arg	Asp	Leu	Leu
1				5					10					15	
Tyr	Arg	His	His	Leu	Gly	Thr	Ser	Gln	Thr	Ile	Arg	Phe	Ser	Gly	Pro
			20					25					30		
Thr	Gly	Ser	Thr	Glu	Ser	Gly	Thr	Gln	Gly	Phe	Gln	His	Ile	Leu	Arg
		35					40					45			
Gly	Asp	Ser	Ser	Gly	Cys	Val	Thr	Leu	Arg	Thr	Thr	Gly	Lys	Val	Ala
	50					55					60				
Leu	Gly	Ser	Glu	Ile	Arg	Val	His	Ile	Leu	Gly	Leu	Pro	Leu	Thr	Asp
65					70					75				80	
Cys	Asn	Gly	Gly	Gln	Val	Thr	Cys	Arg	Ala	Gln					
				85						90					

<210> 975

<211> 2604

<212> DNA

<213> Homo sapiens

<400> 975

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<210> 976

<211> 411

<212> PRT

<213> Homo sapiens

<400> 976

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Arg	Arg	Asn	Glu	Pro	Thr	Leu	Pro	Arg	Glu	Phe	Thr	Arg	Arg	Gly	Arg	35	40	45	
Arg	Gly	Ala	Val	Ser	Val	Asp	Ser	Leu	Ala	Glu	Leu	Glu	Asp	Gly	Ala	50	55	60	
Leu	Leu	Leu	Gln	Thr	Leu	Gln	Leu	Ser	Lys	Ile	Ser	Phe	Pro	Ile	Gly	65	70	75	80
Gln	Arg	Leu	Leu	Gly	Ser	Lys	Arg	Lys	Met	Ser	Leu	Asn	Pro	Ile	Ala	85	90		95
Lys	Gln	Ile	Pro	Gln	Val	Val	Glu	Ala	Cys	Cys	Gln	Phe	Ile	Glu	Lys	100	105		110
His	Gly	Leu	Ser	Ala	Val	Gly	Ile	Phe	Thr	Leu	Glu	Tyr	Ser	Val	Gln	115	120		125
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Phe	Phe	Arg	Asp	Met	Lys	Asp	Ser	Leu	Leu	Pro	Asp	Asp	Leu	Tyr	Met	165	170		175
Ser	Phe	Leu	Leu	Thr	Ala	Thr	Leu	Lys	Pro	Gln	Asp	Gln	Leu	Ser	Ala	180	185		190
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Glu	Arg	Leu	Leu	Lys	Ala	Leu	His	Lys	Ile	Thr	Glu	Asn	Cys	Glu	Asp	210	215		220
Ser	Ile	Gly	Ile	Asp	Gly	Gln	Leu	Val	Pro	Gly	Asn	Arg	Met	Thr	Ser	225	230	235	240
Thr	Asn	Leu	Ala	Leu	Val	Phe	Gly	Ser	Ala	Leu	Leu	Lys	Lys	Gly	Lys	245	250		255
Phe	Gly	Lys	Arg	Glu	Ser	Arg	Lys	Thr	Lys	Leu	Gly	Ile	Asp	His	Tyr	260	265		270
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 Gln Ser Lys Pro Ser Asp Glu Gly Ser Ser Glu Glu Pro Ala Val Pro
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 Ser Gly Thr Ala Arg Ser His Asp Asp Glu Glu Gly Ala Gly Asn Pro
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<210> 977
 <211> 378
 <212> DNA
 <213> Homo sapiens

<400> 977
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<210> 978
 <211> 126
 <212> PRT
 <213> Homo sapiens

<400> 978
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 35 40 45
 Val Cys Leu Ala Ser Asp Ala Gln Phe Ser Asp Phe Leu Gly Ser Met
 50 55 60
 Gly Pro Ala Gln Phe Val Gly Arg Gln Thr Leu Ala Thr Thr Pro Met

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Gly	Asp	Val	Glu	Ile	Gly	Leu	Gln	Glu	Val
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Asp	Ile	Ile	Gln	Ala	Arg	Gly	Leu	Thr	Ala
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<210> 979
 <211> 3500
 <212> DNA
 <213> Homo sapiens

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<210> 980
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 <212> PRT
 <213> Homo sapiens

<400> 980
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<210> 981
 <211> 404
 <212> DNA
 <213> Homo sapiens

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<210> 982
 <211> 134
 <212> PRT
 <213> Homo sapiens

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 35 40 45
 Asp Asp Glu Asp Val Asp Asp Glu Asn Thr Asp Ile Thr Ala Leu Ala
 50 55 60
 Glu Ala Gly Ala Arg Gly Gly Ala Gly Asn His Arg Phe Gly Gly Asp
 65 70 75 80
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 85 90 95
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<210> 983
 <211> 579
 <212> DNA
 <213> Homo sapiens

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<210> 984
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 <212> PRT
 <213> Homo sapiens

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<210> 985
 <211> 313
 <212> DNA
 <213> Homo sapiens

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<210> 986
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 <213> Homo sapiens

<400> 986
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Ala Asn Phe Lys Ala His Asp Leu Lys Leu Val Thr Glu Ile Asn His			
	35	40	45
Leu Asp Asn Gln Ile Phe Ile Asp Tyr Ala Lys Leu Ile Lys Glu Ser			
	50	55	60
Asp Ala Leu Pro Val Asp Gln Gln Val Ala Phe Phe Leu Asn Asn Met			
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Gly Phe			

<210> 987

<211> 4224

<212> DNA

<213> Homo sapiens

<400> 987

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<210> 988
 <211> 873
 <212> PRT
 <213> Homo sapiens

<400> 988

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Met	Leu	Leu	Arg	Gly	Leu	Thr	Gln	Ile	Gln	Ser	Arg	Ile	Leu	Gly	Pro
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Phe	Ala	Leu	Thr	Glu	Asp	Asp	Pro	Gln	Glu	Val	Ser	Ala	Thr	Val	Tyr
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Leu	Asp	Lys	Leu	Ala	Thr	Val	Ile	Ser	Val	Trp	Asn	Ser	Asp	Thr	Gln
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Asn	Pro	Tyr	His	Gln	Gln	Ala	Leu	Ala	Glu	Lys	Val	Lys	Glu	Ala	Glu
			100					105					110		
Arg	Asp	Val	Ser	Leu	Thr	Ser	Leu	Ala	Lys	Leu	Pro	Ser	Glu	Thr	Ile
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Phe	Val	Gly	Cys	Glu	Phe	Leu	His	His	Leu	Leu	Arg	Glu	Trp	Gly	Glu
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Tyr	Arg	Leu	Cys	Asp	Ser	Leu	Thr	Ser	Phe	Ser	Gln	Asn	Ala	Thr	Leu
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Tyr	Leu	Asn	Arg	Thr	Ser	Leu	Ser	Lys	Glu	Asp	Arg	Gln	Val	Val	Ser
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Glu	Leu	Ala	Glu	Cys	Val	Arg	Asp	Phe	Leu	Arg	Lys	Thr	Ser	Thr	Val
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Leu	Lys	Asn	Arg	Ala	Leu	Glu	Asp	Ile	Thr	Ala	Ser	Ile	Ala	Met	Ala
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Val	Ile	Gln	Gln	Lys	Met	Asp	Arg	His	Met	Glu	Val	Cys	Tyr	Ile	Phe
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Gly	Ser	Asn	Arg	Ala	Leu	Phe	Arg	Glu	Pro	Asp	Leu	Val	Leu	Arg	Leu
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Leu	Glu	Thr	Val	Ile	Asp	Val	Ser	Thr	Ala	Asp	Arg	Ala	Ile	Pro	Glu
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Ser	Gln	Ile	Arg	Gln	Val	Ile	His	Leu	Ile	Leu	Glu	Cys	Tyr	Ala	Asp
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Trp	Gly	Arg	Lys	Gly	Leu	Ser	Glu	Lys	Leu	Leu	Ala	Tyr	Val	Glu	Gly
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Phe	Gln	Glu	Asp	Leu	Asn	Thr	Thr	Phe	Asn	Gln	Leu	Thr	Gln	Ser	Ala
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Ser	Glu	Gln	Gly	Leu	Ala	Lys	Ala	Val	Ala	Ser	Val	Ala	Arg	Leu	Val
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Ile	Val	His	Pro	Glu	Val	Thr	Val	Lys	Lys	Met	Cys	Ser	Leu	Ala	Val

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Val	Asn	Leu	Gly	Thr	His	Lys	Phe	Leu	Ala	Gln	Ile	Leu	Thr	Ala	Phe		
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Pro	Ala	Leu	Arg	Phe	Val	Glu	Val	Gln	Gly	Pro	Asn	Ser	Ser	Ala	Thr		
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Pro	Val	Lys	Pro	Gln	Gly	Ile	Pro	Val	Ala	Ala	Leu	Leu	Glu	Pro	Asp		
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Ile	His	Ile	Leu	Glu	Leu	Leu	Cys	Glu	Ile	Val	Ser	Ala	Asn	Ala	Glu		
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Cys	Lys	Leu	Ser	Glu	Asp	Glu	Trp	Thr	Ser	Gln	Ala	His	Pro	Gly	Tyr		
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Val	Gln	Val	Met	Pro	Trp	Cys	Ser	Pro	Gln	Glu	Trp	Gln	Arg	Leu	His		
					675		680						685				
Gln	Leu	Thr	Arg	Arg	Leu	Leu	Glu	Lys	Gln	Leu	Leu	His	Val	Pro	Tyr		
					690		695					700					
Ser	Leu	Glu	Tyr	Ile	Gln	Phe	Val	Pro	Leu	Leu	Asn	Leu	Lys	Pro	Phe		
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Val	Arg	Ala	Ile	Gln	Ala	Ala	Gly	Pro	Trp	Val	Gln	Gly	Pro	Glu	Gln		
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Asp	Leu	Thr	Gln	Glu	Ala	Leu	Phe	Val	Tyr	Thr	Gln	Val	Phe	Cys	His		
785					790				795						800		
Ala	Leu	His	Ile	Met	Ala	Met	Leu	His	Pro	Glu	Val	Cys	Glu	Pro	Leu		

805 810 815
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 820 825 830
 Thr Asn Pro Ser Val Ser Ser Leu Leu Gln Arg Ala His Glu Gln Cys
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 Phe Leu Lys Ser Ile Ala Glu Gly Ile Gly Pro Glu Glu Arg Arg Gln
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 Thr Leu Leu Gln Lys Met Ser Ser Phe
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<210> 989

<211> 402

<212> DNA

<213> Homo sapiens

<400> 989

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<210> 990

<211> 134

<212> PRT

<213> Homo sapiens

<400> 990

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 Arg Arg Val Ala Leu Cys Lys Leu Ile Glu Gln Pro Asp Leu Leu
 35 40 45
 Leu Leu Asp Glu Pro Thr Asn His Leu Asp Ala Glu Ser Val Asn Trp
 50 55 60
 Leu Glu Gly His Leu Lys Ser Tyr Pro Gly Ala Val Leu Ala Val Thr
 65 70 75 80
 His Asp Arg Tyr Phe Leu Asp His Val Ala Glu Trp Ile Cys Glu Val
 85 90 95
 Asp Arg Gly Gln Leu His Pro Tyr Glu Gly Asn Tyr Ser Thr Tyr Leu
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 Asp Thr Lys Arg Lys Arg Leu Gln Ile Glu Gly Lys Lys Asp Ala Lys
 115 120 125
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<210> 991
 <211> 359
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 <213> Homo sapiens

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<210> 992
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 35 40 45
 Tyr Trp Leu Thr Thr Gly Asn Thr Glu Asp Ser Phe Arg Glu Ser Asp
 50 55 60
 Val Phe Ser Pro Thr Val Val Ser Ala Glu Ser Thr Asp Gln Tyr Val
 65 70 75 80
 Trp Ile Glu Val Val Glu Ala Asn Phe Ser Cys Gly Thr Gly Glu Ser
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 Ile Glu Phe His Phe Asp Ala Ile Asn Gly Lys Ile Pro Phe Pro Ala
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<210> 993
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 <212> DNA
 <213> Homo sapiens

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<210> 994

<211> 110

<212> PRT

<213> Homo sapiens

<400> 994

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Glu	Ile	Pro	Ala	Gln	Gly	Arg	Thr	Ser	Cys	Tyr	Asp	Arg	Cys	Met	Ile
		20					25					30			
Tyr	Leu	Ser	Gln	Asp	Tyr	Ile	Gly	Glu	Leu	Pro	Lys	Gln	His	Ile	Ser
	35					40					45				
Leu	Gly	Lys	Phe	Asp	Pro	Asp	Asn	Ile	Pro	Ala	Asp	Pro	Asn	Glu	Leu
	50					55				60					
Phe	Ala	Thr	Trp	Phe	Lys	Glu	Ala	Val	Glu	Asn	Glu	Val	Gly	Asp	Pro
65				70				75				80			
Thr	Ala	Val	Thr	Val	Ala	Thr	Val	Asp	Asp	Asn	Gly	Gln	Pro	Asp	Ala
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Arg	Val	Val	Asp	Leu	Leu	Tyr	Leu	Asn	Ser	Asp	Gly	Phe	His		
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<210> 995

<211> 924

<212> DNA

<213> Homo sapiens

<400> 995

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 aactacgaca tgctcatcgg cgtcaaccag ggagagggcc tcaagttcgt ggaggactct
 180
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 420

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<210> 996

<211> 308

<212> PRT

<213> Homo sapiens

<400> 996

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Leu	Met	Gln	Gln	Gly	Glu	Phe	Leu	Asn	Tyr	Asp	Met	Leu	Ile	Gly	Val
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Asn	Gln	Gly	Glu	Gly	Leu	Lys	Phe	Val	Glu	Asp	Ser	Ala	Glu	Ser	Glu
		50				55					60				
Asp	Gly	Val	Ser	Ala	Ser	Ala	Phe	Asp	Phe	Thr	Val	Ser	Asn	Phe	Val
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Asp	Asn	Leu	Tyr	Gly	Tyr	Pro	Glu	Gly	Lys	Asp	Val	Leu	Arg	Glu	Thr
			85					90						95	
Ile	Lys	Phe	Met	Tyr	Thr	Asp	Trp	Ala	Asp	Arg	Asp	Asn	Gly	Glu	Met
			100					105						110	
Arg	Arg	Lys	Thr	Leu	Leu	Ala	Leu	Phe	Thr	Asp	His	Gln	Trp	Val	Ala
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Pro	Ala	Val	Ala	Thr	Ala	Lys	Leu	His	Ala	Asp	Tyr	Gln	Ser	Pro	Val
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Tyr	Phe	Tyr	Thr	Phe	Tyr	His	His	Cys	Gln	Ala	Glu	Gly	Arg	Pro	Glu
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Asp	Val	Met	Leu	Ser	Ala	Val	Val	Met	Thr	Tyr	Trp	Thr	Asn	Phe	Ala
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Lys	Thr	Gly	Asp	Pro	Asn	Gln	Pro	Val	Pro	Gln	Asp	Thr	Lys	Phe	Ile
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<211> 320
<212> DNA
<213> Homo sapiens
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<213> Homo sapiens
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<210> 999
<211> 401

<212> DNA

<213> Homo sapiens

<400> 999

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 120
 caactatctc aatcgtggct acaaggacat tctgagctat gcagacgatg ctagtctttt
 180
 gcaaaagcct ccagcagtgg cttcagatga tctggatata ggtctcttga agagggcctt
 240
 ggatgagtgg gtggetgatg ctaagaacca cattctcaat actgaaaact tcttttagcgg
 300
 gtcaaccggg ctcaacattg acagtttcta cgtctttggg gaccaagaca tctgctggca
 360
 gttggcagct attctgaagc agagcatgaa tcgggaattg t
 401

<210> 1000

<211> 115

<212> PRT

<213> Homo sapiens

<400> 1000

Met Val His Leu Ser Lys Ser Phe Ile Gly Val Tyr Leu Tyr Ser Glu
 1 5 10 15
 Gly Lys Phe Val Thr Ser Asn Tyr Leu Asn Arg Gly Tyr Lys Asp Ile
 20 25 30
 Leu Ser Tyr Ala Asp Asp Ala Ser Leu Leu Gln Lys Pro Pro Ala Val
 35 40 45
 Ala Ser Asp Asp Leu Asp Thr Gly Leu Leu Lys Arg Ala Leu Asp Glu
 50 55 60
 Trp Val Ala Asp Ala Lys Asn His Ile Leu Asn Thr Glu Asn Phe Phe
 65 70 75 80
 Ser Gly Ser Thr Gly Leu Asn Ile Asp Ser Phe Tyr Val Phe Gly Asp
 85 90 95
 Gln Asp Ile Cys Trp Gln Leu Ala Ala Ile Leu Lys Gln Ser Met Asn
 100 105 110
 Arg Glu Leu
 115

<210> 1001

<211> 351

<212> DNA

<213> Homo sapiens

<400> 1001

cgcggtattg caatgcgcct ggtgccgaat gctaaacctg ctcttgattg cccggtactg
 60
 ttcccttatg ccctaatagc ggtgattggt ggcttctctg ccactaccgt tggttcaatt
 120
 atcggatatga ttgtcttccc gctggttggg ctggcgatga tccttccggg tctgctaact
 180

aacttcttcg ctggtggtgc cgctggagtc tttggcaacg cgatgggagg acgtaaaggg
 240
 gcaattattg gcggcgtagt gcacgggctg tttatcaccc tggtaccagc gatgctaatac
 300
 cccttactgg aaaccttcgg cttcaaaggc gtcaccttca gtgattccga t
 351

<210> 1002

<211> 117

<212> PRT

<213> Homo sapiens

<400> 1002

Arg	Gly	Ile	Ala	Met	Arg	Leu	Val	Pro	Asn	Ala	Lys	Pro	Ala	Leu	Asp
1				5				10					15		
Cys	Pro	Val	Leu	Phe	Pro	Tyr	Ala	Pro	Asn	Ala	Val	Ile	Val	Gly	Phe
		20						25					30		
Leu	Ala	Thr	Thr	Val	Gly	Ser	Ile	Ile	Gly	Met	Ile	Val	Phe	Pro	Leu
		35					40					45			
Phe	Gly	Leu	Ala	Met	Ile	Leu	Pro	Gly	Leu	Leu	Thr	Asn	Phe	Phe	Ala
	50					55					60				
Gly	Gly	Ala	Ala	Gly	Val	Phe	Gly	Asn	Ala	Met	Gly	Gly	Arg	Lys	Gly
65				70						75				80	
Ala	Ile	Ile	Gly	Gly	Val	Val	His	Gly	Leu	Phe	Ile	Thr	Leu	Leu	Pro
			85					90					95		
Ala	Met	Leu	Ile	Pro	Leu	Leu	Glu	Thr	Phe	Gly	Phe	Lys	Gly	Val	Thr
		100						105					110		
Phe	Ser	Asp	Ser	Asp											
		115													

<210> 1003

<211> 444

<212> DNA

<213> Homo sapiens

<400> 1003

acgcgtcctc ctttagtcga tcgcgaatat gataggcgaa gcgacgtgat ggtgtgacgc
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 acgagcactg ccccatctcc taggcttagg gttatgcaga ctcccatcga cgctacctcc
 120
 acccccgcacat ggggcacact ctccggccta aagtcccgct tcgctgacgg gccacataaa
 180
 ctgcgccggtt tggtcgacgc cgaccctcac cgcgctgagc gctacacctt tgacgtcgcg
 240
 gatttgcaag tcgatttata gaagaacctc cttaccgacg agattcgtga cgctctcttc
 300
 gaactggctg cgcagatgcg cgtcaccgag cgtcgtgacg cgatgtatgc cggtagcac
 360
 atcaacgtca ccgaggaccg cgccgtcctc cataccgcgc tgtgtcgtcc ccgcactgac
 420
 gagctgcatg ttgacggtca ggat
 444

<210> 1004

<211> 117
 <212> PRT
 <213> Homo sapiens

<400> 1004

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Met Gln Thr Pro Ile Asp Ala Thr Ser Thr Pro Ala Trp Gly Thr Leu
 1             5             10             15
Ser Gly Leu Lys Ser Arg Phe Ala Asp Gly Pro His Lys Leu Arg Arg
      20             25             30
Leu Phe Asp Ala Asp Pro His Arg Ala Glu Arg Tyr Thr Phe Asp Val
      35             40             45
Ala Asp Leu His Val Asp Leu Ser Lys Asn Leu Leu Thr Asp Glu Ile
      50             55             60
Arg Asp Ala Leu Leu Glu Leu Ala Ala Gln Met Arg Val Thr Glu Arg
      65             70             75             80
Arg Asp Ala Met Tyr Ala Gly Glu His Ile Asn Val Thr Glu Asp Arg
      85             90             95
Ala Val Leu His Thr Ala Leu Cys Arg Pro Arg Thr Asp Glu Leu His
      100             105             110
Val Asp Gly Gln Asp
      115

```

<210> 1005
 <211> 299
 <212> DNA
 <213> Homo sapiens

<400> 1005

```

ccatggccat tcctctggtg actgcatcca gtccgatgga tttaaaccacc cccaatgtgc
60
tggtgactcc caagtttaca cctccagcca gggcttctct cctgggtttg catacccacc
120
tatctatctg ccttagccac tcgtgtctga cgagcacctc acacctccag aggtctctca
180
tttcttccca tgctgcttc tcccacactc ctccctctca catgagggca acttcactct
240
cccagttgct caggcccca accctccatca gttttgactc ttctctcgca cactactcg
299

```

<210> 1006
 <211> 99
 <212> PRT
 <213> Homo sapiens

<400> 1006

```

Met Ala Ile Pro Leu Val Thr Ala Ser Ser Pro Met Asp Leu Asn Thr
 1             5             10             15
Pro Asn Val Leu Val Thr Pro Lys Phe Thr Pro Pro Ala Arg Ala Ser
      20             25             30
Leu Leu Gly Leu His Thr His Leu Ser Ile Cys Leu Ser His Ser Cys
      35             40             45
Leu Thr Ser Thr Ser His Leu Gln Arg Leu Leu Ile Ser Ser His Ala
      50             55             60
Cys Phe Ser His Thr Pro Pro Ser His Met Arg Ala Thr Ser Ser Ser

```

<400> 1009

```
<210> 1010
<211> 104
<212> PRT
<213> Homo sapiens
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<210> 1011
<211> 330
<212> DNA
<213> Homo sapiens
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<210> 1012

<211> 55
 <212> PRT
 <213> Homo sapiens

<400> 1012
 Met Ala Gly Glu Leu Thr Pro Glu Glu Glu Ala Gln Tyr Lys Lys Ala
 1 5 10 15
 Phe Ser Ala Val Asp Thr Asp Gly Asn Gly Thr Ile Asn Ala Gln Glu
 20 25 30
 Leu Gly Ala Ala Leu Lys Ala Thr Gly Lys Asn Leu Ser Glu Ala Gln
 35 40 45
 Leu Lys Lys Leu Ile Ser Glu
 50 55

<210> 1013
 <211> 432
 <212> DNA
 <213> Homo sapiens

<400> 1013
 nacttgacaca tcgtgggtggc gtcgctgcgt gcggcactga caatgtgact ggcgcatctcg
 60
 tggcggcgctc tctcgtcgc cgggagcggc gaggaaggat taacgatgac cagcgacgtc
 120
 cccgggattg gctcgaacgc cgccactttg gcgcgttccc aggctcgag tgacaaggtc
 180
 gaggtgatt tggcgggtcca tcccgacaag tggcgcatctc tgggggggga ccgtcctact
 240
 ggcagcctgc acatcgggtca ctacttcggg tcgctggcga atcgggtacg cgtgcagaac
 300
 aagggcattg agtctttcct tgctcgtcgt gactaccagg ttatctatga ccgcggggggg
 360
 ggtggtgacc tgcaggccaa tgttatgtcg aatgtcgccg attacctggc aatcggcatt
 420
 gacccaacgc gt
 432

<210> 1014
 <211> 109
 <212> PRT
 <213> Homo sapiens

<400> 1014
 Met Thr Ser Asp Val Pro Gly Ile Gly Ser Asn Ala Ala Thr Leu Ala
 1 5 10 15
 Arg Ser Gln Ala Arg Ser Asp Lys Val Glu Ala Asp Leu Ala Val His
 20 25 30
 Pro Asp Lys Trp Arg Ile Leu Gly Gly Asp Arg Pro Thr Gly Ser Leu
 35 40 45
 His Ile Gly His Tyr Phe Gly Ser Leu Ala Asn Arg Val Arg Val Gln
 50 55 60
 Asn Lys Gly Ile Glu Ser Phe Leu Val Val Ala Asp Tyr Gln Val Ile
 65 70 75 80
 Tyr Asp Arg Gly Gly Gly Gly Asp Leu Gln Ala Asn Val Met Ser Asn

85 90 95
 Val Ala Asp Tyr Leu Ala Ile Gly Ile Asp Pro Thr Arg
 100 105

<210> 1015
 <211> 467
 <212> DNA
 <213> Homo sapiens

<400> 1015
 nngaattcga tggctgtgaa aggtcgagct cttaagtgtt ttcatatccc ctgtgtggtt
 60
 gaaaacttcc cgatgaaagc gcgcacgggt gaagagctga aagaattgga aagagtttta
 120
 cagcaaaaga agattgaagc agagtgtctt aaactacgga aggaaattgt agaggctcag
 180
 tctggagtta agttgattaa acagcgtcat gaagaggatg atgaagaaga ggaagaggaa
 240
 gacaagacag taaaatatag caatttgccc aattacctgc ttggtagtct gagtactgat
 300
 tttggggtag atacctcttt attgtcaagc caattggagc ttcattccag agaagagaaa
 360
 atcaacaaaa ttatattatt gaaagatatt atttacaagg taaaaactgt tttcaataat
 420
 gagtttgacg ctgcatataa acaaaaagag ttggaattg cagcgt
 467

<210> 1016
 <211> 155
 <212> PRT
 <213> Homo sapiens

<400> 1016
 Xaa Asn Ser Met Ala Val Lys Gly Arg Ala Leu Lys Cys Phe His Ile
 1 5 10 15
 Pro Cys Val Val Glu Asn Phe Pro Met Lys Ala Arg Thr Val Glu Glu
 20 25 30
 Leu Lys Glu Leu Glu Arg Val Leu Gln Gln Lys Lys Ile Glu Ala Glu
 35 40 45
 Cys Leu Lys Leu Arg Lys Glu Ile Val Glu Ala Gln Ser Gly Val Lys
 50 55 60
 Leu Ile Lys Gln Arg His Glu Glu Asp Asp Glu Glu Glu Glu Glu
 65 70 75 80
 Asp Lys Thr Val Lys Tyr Ser Asn Leu Pro Asn Tyr Leu Leu Gly Ser
 85 90 95
 Leu Ser Thr Asp Phe Gly Val Asp Thr Ser Leu Leu Ser Ser Gln Leu
 100 105 110
 Glu Leu His Ser Arg Glu Glu Lys Ile Asn Gln Ile Ile Leu Leu Lys
 115 120 125
 Asp Ile Ile Tyr Lys Val Lys Thr Val Phe Asn Asn Glu Phe Asp Ala
 130 135 140
 Ala Tyr Lys Gln Lys Glu Phe Glu Ile Ala Arg
 145 150 155

<210> 1017
 <211> 335
 <212> DNA
 <213> Homo sapiens

<400> 1017
 acgcgtggct gggtgggtat gtggaacccat gtgcgcgcta atgagaagga tgcgaagggg
 60
 aacattaaag tgggtcgccc cggctacttt gcggagggtca tggatttcta tgcgcattat
 120
 ctgaaggggtg cggttaccocg tttccgtccg aattttattg tgcaggataa tacggggccgt
 180
 tggcgtgttc agtcgtcgtg gccgcagccg aatcgcaactg ttacttttgc gggaccccg
 240
 ggcattgtcc gctacgggtac gacgttggcg gccgcacgc atgggaatgg tcaggetatt
 300
 ccgcaggcgg atgcacagtc tcttaaccgc gagaa
 335

<210> 1018
 <211> 105
 <212> PRT
 <213> Homo sapiens

<400> 1018
 Met Trp Asn His Val Arg Ala Asn Glu Lys Asp Ala Lys Gly Asn Ile
 1 5 10 15
 Lys Val Gly Arg Pro Gly Tyr Phe Ala Glu Val Met Asp Phe Tyr Ala
 20 25 30
 His Tyr Leu Lys Gly Ala Val Thr Arg Phe Arg Pro Asn Phe Ile Val
 35 40 45
 Gln Asp Asn Thr Gly Arg Trp Arg Val Gln Ser Ser Trp Pro Gln Pro
 50 55 60
 Asn Arg Thr Val Thr Phe Ala Gly Pro Arg Gly Ile Val Arg Tyr Gly
 65 70 75 80
 Thr Thr Leu Ala Ala Arg Thr His Gly Asn Gly Gln Ala Ile Pro Gln
 85 90 95
 Ala Asp Ala Gln Ser Leu Asn Arg Glu
 100 105

<210> 1019
 <211> 454
 <212> DNA
 <213> Homo sapiens

<400> 1019
 acgcgtgaag gggtagtcgt agtagaagtc gtccacaaac acggggccccc gcagggtccag
 60
 ctctggagcc tctcctcaa tggcgttgcc catgggtgcct ggcttgggtg atgaggcggg
 120
 tgaagggcgt ggggccagggt ggtgcgggat gaagtcagcc tcgttgaaga gtcgtgggt
 180
 ggaggagccg ctgcctgagc cttcagggcc cagtgtgccc agggggccacc gacagagtgg
 240

cagagagcag gtgacttctt ggcactgcgg agcgaggacc cggagaagta cttcctcaat
 300
 ggtggctgga ccatccagtg gaacggggac taccaggtgg cagggaccac cttcacatac
 360
 gcacgcaggg gcaactggga gaacctcacg tccccgggtc ccaccaagga gcctgtctgg
 420
 atccagctgc tgttccagga gagcaacctt gggg
 454

<210> 1020

<211> 125

<212> PRT

<213> Homo sapiens

<400> 1020

Met	Ala	Leu	Pro	Met	Val	Pro	Gly	Leu	Gly	Asp	Glu	Ala	Gly	Glu	Gly
1				5				10					15		
Arg	Gly	Ala	Arg	Trp	Cys	Gly	Met	Lys	Ser	Ala	Ser	Leu	Lys	Ser	Ser
			20				25					30			
Trp	Leu	Glu	Glu	Pro	Leu	Pro	Glu	Pro	Ser	Gly	Pro	Ser	Val	Pro	Arg
		35				40					45				
Gly	His	Arg	Gln	Ser	Gly	Arg	Glu	Gln	Val	Thr	Ser	Trp	His	Cys	Gly
	50				55				60						
Ala	Arg	Thr	Arg	Arg	Ser	Thr	Ser	Ser	Met	Val	Ala	Gly	Pro	Ser	Ser
65				70				75					80		
Gly	Thr	Gly	Thr	Thr	Arg	Trp	Gln	Gly	Pro	Pro	Ser	His	Thr	His	Ala
			85				90					95			
Gly	Ala	Thr	Gly	Arg	Thr	Ser	Arg	Pro	Arg	Val	Pro	Pro	Arg	Ser	Leu
			100				105					110			
Ser	Gly	Ser	Ser	Cys	Cys	Ser	Arg	Arg	Ala	Thr	Leu	Gly			
		115				120					125				

<210> 1021

<211> 366

<212> DNA

<213> Homo sapiens

<400> 1021

cagctgtgtc gtgacctctt gtagaccaga gagaggtaga gcatgaaaaa tgctcattga
 60
 gccgagatta tctgacagga ccaaagcata taaagttgac tgaagcagga gcaaacacgc
 120
 tggttgaggg tcaagtgttg gggcagcagc aacaacaaac caaaaaaag ccctttgaac
 180
 tcccttaatg ttgccaaaag gttctggtag agaacaagtc acatgcctaa gaaggtcttt
 240
 taaagggcac tcttgagttt tcagcatttg gtccggggaa ttgcacaagg ctctgcttaa
 300
 atgcagagct ctttctagca tcttcatatt caaggcggaa aaactgagct tggcgaggaa
 360
 ccctgt
 366

<210> 1022

<211> 109
 <212> PRT
 <213> Homo sapiens

<400> 1022
 Met Lys Met Leu Glu Arg Ala Leu His Leu Ser Arg Ala Leu Cys Asn
 1 5 10 15
 Ser Pro Asp Gln Met Leu Lys Leu Gln Glu Cys Pro Leu Lys Asp Leu
 20 25 30
 Leu Arg His Val Thr Cys Ser Leu Pro Glu Pro Leu Gly Asn Ile Lys
 35 40 45
 Gly Val Gln Arg Ala Phe Phe Trp Phe Val Val Ala Ala Ala Pro Ala
 50 55 60
 Leu Asp Pro Gln Pro Ala Cys Leu Leu Leu Leu Gln Ser Thr Leu Tyr
 65 70 75 80
 Ala Leu Val Leu Ser Asp Asn Leu Gly Ser Met Ser Ile Phe His Ala
 85 90 95
 Leu Pro Leu Ser Gly Leu Gln Glu Val Thr Thr Gln Leu
 100 105

<210> 1023
 <211> 426
 <212> DNA
 <213> Homo sapiens

<400> 1023
 gccgggcttc gggctctctga agcgatcaac ctggccgact cggatgcaga tctggacggc
 60
 ggcatacctga ccatacagca gaccaagttt ggcaagtccc gcatggtgcc gctacacccc
 120
 agcgtgatcg gtccgatggc agcctaccgg gccttgccgc gccagtacgt gcctgcgaag
 180
 ccgcagatga cattcttcgt gggctcgcgt ggcggtgcacc ggggtgaacc gctgggagat
 240
 aggcaggtgc atcgagtgtt ctgtcagctg cgcgagcaat tgggttgat cgatcgcgcc
 300
 ggccatggcc gaccgcgggt gcatgacctg cgccatagct tcgccgtgag acggatgatc
 360
 ctgtggcacc agcaggagc gaaccttgac caacgaatgc tggccctgtc cacgtacatg
 420
 ggccac
 426

<210> 1024
 <211> 142
 <212> PRT
 <213> Homo sapiens.

<400> 1024
 Ala Gly Leu Arg Val Ser Glu Ala Ile Asn Leu Ala Asp Ser Asp Ala
 1 5 10 15
 Asp Leu Asp Gly Gly Ile Leu Thr Ile Gln Gln Thr Lys Phe Gly Lys
 20 25 30
 Ser Arg Met Val Pro Leu His Pro Ser Val Ile Gly Pro Met Ala Ala

```

      35      40      45
Tyr Arg Ala Leu Arg Arg Gln Tyr Val Pro Ala Lys Pro Gln Met Thr
  50      55      60
Phe Phe Val Gly Ser Arg Gly Val His Arg Gly Glu Pro Leu Gly Asp
  65      70      75      80
Arg Gln Val His Arg Val Phe Cys Gln Leu Arg Glu Gln Leu Gly Trp
      85      90      95
Ile Asp Arg Gly Gly His Gly Arg Pro Arg Val His Asp Leu Arg His
      100      105      110
Ser Phe Ala Val Arg Arg Met Ile Leu Trp His Gln Gln Gly Ala Asn
      115      120      125
Leu Asp Gln Arg Met Leu Ala Leu Ser Thr Tyr Met Gly His
      130      135      140

```

<210> 1025

<211> 518

<212> DNA

<213> Homo sapiens

<400> 1025

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naccgtggt gcgcgcaggt ggccgcgcgg tccctttgct cctgcgcaa gccggagggg
60
tgcccagaag gctaccacta gcctcagcga aggggtgcgcc ctgagagccg ggtagcctcg
120
gatagcggcg ctgcgtacgc gatgatggat gagccgtggt gggaagggcg cgtcgccctcg
180
gacgtccact gcacctgcg cgagaaggaa ctgaagctgc ccaccttcg agccactcc
240
ccactcctga agagccgcg gttcttcgtg gacatcctga ccctgctgag cagccactgc
300
cagctctgcc ctgcagcccg gcacctggcc gtctacctgc tggaccactt catggatcgc
360
tacaacgtca ccacctcaa gcagctctac accgtggccg tctcctgcct cctgcttgca
420
agtaagtctg aggatcggga agaccacgtc cccaagttgg agcaaataaa cagcacgagg
480
atcctgagca gccagaactt caccctcacc aagaagga
518

```

<210> 1026

<211> 125

<212> PRT

<213> Homo sapiens

<400> 1026

```

Met Met Asp Glu Pro Trp Trp Glu Gly Arg Val Ala Ser Asp Val His
  1      5      10      15
Cys Thr Leu Arg Glu Lys Glu Leu Lys Leu Pro Thr Phe Arg Ala His
      20      25      30
Ser Pro Leu Leu Lys Ser Arg Arg Phe Phe Val Asp Ile Leu Thr Leu
      35      40      45
Leu Ser Ser His Cys Gln Leu Cys Pro Ala Ala Arg His Leu Ala Val
      50      55      60
Tyr Leu Leu Asp His Phe Met Asp Arg Tyr Asn Val Thr Thr Ser Lys

```

```

65          70          75          80
Gln Leu Tyr Thr Val Ala Val Ser Cys Leu Leu Leu Ala Ser Lys Phe
          85          90          95
Glu Asp Arg Glu Asp His Val Pro Lys Leu Glu Gln Ile Asn Ser Thr
          100          105          110
Arg Ile Leu Ser Ser Gln Asn Phe Thr Leu Thr Lys Lys
          115          120          125

```

<210> 1027

<211> 465

<212> DNA

<213> Homo sapiens.

<400> 1027

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ggcccaaaag tcataaaga aaagctgaca caggagctga aggaccacaa cgccaccagc
60
atcctgcagc agctgccgct gctcaaggcc atgcgggaaa agccagccgg aggcacccct
120
gtgctgggca gcctgggtgaa caccngtcct gaagcacatc atnctgggt gaaggtcatc
180
acagctaaca tcctccagct gcaggtgaag cctcggcca atgaccagga gctgctagtc
240
aagatcccc tggacatggt ggctggattc aacacgcccc tggtaagac catcgtggag
300
ttccacatga cgactgagc ccaagccacc atccgcatgg acaccagtgc aagtggcccc
360
accgcctgg tcctcagtga ctgtgccacc agccatggga gcctgcgcat ccaactgctg
420
cataagctct cttcaagct gaacgcctca gctaagcagg tcatg
465

```

<210> 1028

<211> 155

<212> PRT

<213> Homo sapiens

<400> 1028

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Gly Pro Lys Val Ile Lys Glu Lys Leu Thr Gln Glu Leu Lys Asp His
1          5          10          15
Asn Ala Thr Ser Ile Leu Gln Gln Leu Pro Leu Leu Lys Ala Met Arg
          20          25          30
Glu Lys Pro Ala Gly Gly Ile Pro Val Leu Gly Ser Leu Val Asn Thr
          35          40          45
Xaa Pro Glu Ala His His Xaa Trp Leu Lys Val Ile Thr Ala Asn Ile
          50          55          60
Leu Gln Leu Gln Val Lys Pro Ser Ala Asn Asp Gln Glu Leu Leu Val
65          70          75          80
Lys Ile Pro Leu Asp Met Val Ala Gly Phe Asn Thr Pro Leu Val Lys
          85          90          95
Thr Ile Val Glu Phe His Met Thr Thr Glu Ala Gln Ala Thr Ile Arg
          100          105          110
Met Asp Thr Ser Ala Ser Gly Pro Thr Arg Leu Val Leu Ser Asp Cys
          115          120          125
Ala Thr Ser His Gly Ser Leu Arg Ile Gln Leu Leu His Lys Leu Ser

```

130 135 140
 Phe Lys Leu Asn Ala Ser Ala Lys Gln Val Met
 145 150 155

<210> 1029
 <211> 479
 <212> DNA
 <213> Homo sapiens

<400> 1029
 acgcgtgaag ggaaactgtc ctcacagatg agtgtgaggg ttcaaaaaga tactgcctgc
 60
 caagcactgg ccacaaatgc ctggcagaac aactgtcat aagtgtgtag ttgttgttat
 120
 tattactaac caagtgagga aaattatccc tagcaggtcc agatgaccgt gtgcatgaat
 180
 cacagggaga ccctaaagga tttcctcctg taaagctctt tccccaccta tttgctactg
 240
 cctgaaattg ctttagcagg aaacagaatc tctcatgccā caagtgagca taaagtttaa
 300
 aatgtaaatg ctctaggaaa aggcaactca tctcttaaāt tctctccaag gttcaaātcc
 360
 tttccaaaga ggaggctttt gtataagtca gaaggccag tccctgaagg tcatggaaaa
 420
 ggtcatgaca cacggagggg gtgtcaaagg gagactggga aactgaagat gaagctagc
 479

<210> 1030
 <211> 110
 <212> PRT
 <213> Homo sapiens

<400> 1030
 Met Ser Cys Leu Phe Leu Glu His Leu His Phe Lys Leu Tyr Ala His
 1 5 10 15
 Leu Trp His Glu Arg Phe Cys Phe Leu Leu Lys Gln Phe Gln Ala Val
 20 25 30
 Ala Asn Arg Trp Gly Lys Ser Phe Thr Gly Gly Asn Pro Leu Gly Ser
 35 40 45
 Pro Cys Asp Ser Cys Thr Arg Ser Ser Gly Pro Ala Arg Asp Asn Phe
 50 55 60
 Pro His Leu Val Ser Asn Asn Asn Asn Asn Tyr Thr Leu Met Ser Ser
 65 70 75 80
 Cys Ser Ala Arg His Leu Trp Pro Val Leu Gly Arg Gln Tyr Leu Phe
 85 90 95
 Glu Pro Ser His Ser Ser Val Arg Thr Val Ser Leu His Ala
 100 105 110

<210> 1031
 <211> 322
 <212> DNA
 <213> Homo sapiens

<400> 1031

nacgcgtttt atgtcagcgt tgaattggaa gacggcaagt ctatcgccat gctgccccag
 60
 gcagatggct ggtttgaagt ggaggtgaag tgcccgccgg gcactcacta ccgtataaac
 120
 atcgacggcg aaaccgatgt acccgacccg gcatccaggg cgcaagccaa cgatgtgcat
 180
 ggggtggagcg tcgtcgtcga cccgctcgcc tatcaatggc gacaccctaa ctggcaaggc
 240
 cgcccctggc atgaggcggt gatttacgag ctgcacgttg gcgtactggg cgggtacgcc
 300
 gctgttgaac agcaactgcc gc
 322

<210> 1032

<211> 107

<212> PRT

<213> Homo sapiens

<400> 1032

Xaa	Ala	Phe	Tyr	Val	Ser	Val	Glu	Leu	Glu	Asp	Gly	Lys	Ser	Ile	Ala
1				5					10					15	
Met	Leu	Pro	Gln	Ala	Asp	Gly	Trp	Phe	Glu	Val	Glu	Val	Lys	Cys	Pro
			20				25						30		
Ala	Gly	Thr	His	Tyr	Arg	Tyr	Asn	Ile	Asp	Gly	Glu	Thr	Asp	Val	Pro
		35					40					45			
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Arg	Pro	Trp	His	Glu	Ala	Val	Ile	Tyr	Glu	Leu	His	Val	Gly	Val	Leu
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<212> DNA

<213> Homo sapiens

<400> 1033

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 Ile Gly Ile Lys Gly Ala His Val Ile Lys Asp Gly Lys Ala Asp Arg
 50 55 60
 Gly Ile Phe Phe Cys Gly Thr Gly Met Gly Met Ala Ile Thr Ala Asn
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<213> Homo sapiens

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Val Cys Val Xaa Glu Ala Val Cys Ile Cys Xaa Cys Leu Cys Ala Cys
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Thr Xaa Met Cys Ala Cys Met Glu Cys Ile Cys Val Cys Val Trp Thr
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Val Cys Val Ile Met Gln Tyr Val Arg Val Cys Val Trp Ser Val Ser
65           70           75           80
Val Trp His Val Cys Val Tyr Leu Leu Cys Val Ser Val Cys Val Xaa
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<213> Homo sapiens

<400> 1037

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 <212> PRT
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<400> 1038
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 Ser Tyr Ser Gly Pro Gly Pro Gly Met Gly Ile Ser Ala Asn Asn Gln
 50 55 60
 Met His Gly Gln Gly Pro Ser Gln Pro Cys Gly Ala Val Pro Leu Gly
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 Arg Met Pro Ser Ala Gly Met Gln Asn Arg Pro Phe Pro Gly Asn Met
 85 90 95
 Ser Ser Met Thr Pro Ser Ser Pro Gly Met Ser Gln Gln Gly Gly Pro
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 Gly Met Gly Pro Pro Met Pro Thr Val Asn Arg Lys Ala Gln Glu Ala
 115 120 125
 Ala Ala Ala Val Met Gln Ala Ala Asn Ser Ala Gln Ser Arg Gln
 130 135 140
 Gly Ser Phe Pro Gly Met Asn Gln Ser Gly Leu Met Ala Ser Ser Ser
 145 150 155 160
 Pro Tyr Ser Gln Pro Met Asn Asn Ser Ser Ser Leu Met Asn Thr Gln
 165 170 175
 Ala Pro Pro Tyr Ser Met Ala Pro Ala Met Val Asn Ser Ser Ala Ala
 180 185 190
 Ser Val Gly Leu Ala Asp Met Met Ser Pro Gly Glu Ser Lys Leu Pro
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 Leu Pro Leu Lys Ala Asp Gly Lys Glu Glu Gly Thr Pro Gln Pro Glu
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 Ser Lys Ser Lys Asp Ser Tyr Ser Ser Gln Gly Ile Ser Gln Pro Pro
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 Thr Pro Gly Asn Leu Pro Val Pro Ser Pro Met Ser Pro Ser Ser Ala
 245 250 255
 Ser Ile Ser Ser Phe His Gly Asp Glu Ser Asp Ser Ile Ser Ser Pro
 260 265 270
 Gly Trp Pro Lys Thr Pro Ser Ser Pro Lys Ser Ser Ser Ser Thr Thr
 275 280 285
 Thr Gly Glu Lys Ile Thr Lys Val Tyr Glu Leu Gly Asn Glu Pro Glu
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 Arg Lys Leu Trp Val Asp Arg Tyr Leu Thr Phe Met Glu Glu Arg Gly
 305 310 315 320
 Ser Pro Val Ser Ser Leu Pro Ala Val Gly Lys Lys Pro Leu Asp Leu

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770	775	780
His Ile Ser Arg Ala Pro Ser Pro Ala Ser Phe Gln Arg Ser Leu Glu		
785	790	795
Asn Arg Met Ser Pro Ser Lys Ser Pro Phe Leu Pro Ser Met Lys Met		
805	810	815
Gln Lys Val Met Pro Thr Val Pro Thr Ser Gln Val Thr Gly Pro Pro		
820	825	830
Pro Gln Pro Pro Pro Ile Arg Arg Glu Ile Thr Phe Pro Gly Ser		
835	840	845
Val Glu Ala Ser Gln Pro Val Leu Lys Gln Arg Arg Lys Ile Thr Ser		
850	855	860
Lys Asp Ile Val Thr Pro Glu Ala Trp Arg Val Met Met Ser Leu Lys		
865	870	875
Ser Gly Leu Leu Ala Glu Ser Thr Trp Ala Leu Asp Thr Ile Asn Ile		
885	890	895
Leu Leu Tyr Asp Asp Ser Thr Val Ala Thr Phe Asn Leu Ser Gln Leu		
900	905	910
Ser Gly Phe Leu Glu Leu Leu Val Glu Tyr Phe Arg Lys Cys Leu Ile		
915	920	925
Asp Ile Phe Gly Ile Leu Met Glu Tyr Glu Val Gly Asp Pro Ser Gln		
930	935	940
Lys Ala Leu Asp His Asn Ala Ala Arg Lys Asp Asp Ser Gln Ser Leu		
945	950	955
Ala Asp Asp Ser Gly Lys Glu Glu Glu Asp Ala Glu Cys Ile Asp Asp		
965	970	975
Asp Glu Glu Asp Glu Glu Asp Glu Glu Glu Asp Ser Glu Lys Thr Glu		
980	985	990
Ser Asp Glu Lys Ser Ser Ile Ala Leu Thr Ala Pro Asp Ala Ala Ala		
995	1000	1005
Asp Pro Lys Glu Lys Pro Lys Gln Ala Ser Lys Phe Asp Lys Leu Pro		
1010	1015	1020
Ile Lys Ile Val Lys Lys Asn Asn Leu Phe Val Val Asp Arg Ser Asp		
1025	1030	1035
Lys Leu Gly Arg Val Gln Glu Phe Asn Ser Gly Leu Leu His Trp Gln		
1045	1050	1055
Leu Gly Gly Gly Asp Thr Thr Glu His Ile Gln Thr His Phe Glu Ser		
1060	1065	1070
Lys Met Glu Ile Pro Pro Arg Arg Arg Pro Pro Pro Pro Leu Ser Ser		
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Ala Gly Lys Lys Lys Glu Leu Ala Gly Lys Gly Asp Ser Glu Glu Gln		
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Gln Glu Lys Ser Ile Ile Ala Thr Ile Asp Asp Val Leu Ser Ala Arg		
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Pro Gly Ala Leu Pro Glu Asp Ala Asn Pro Gly Pro Gln Thr Glu Ser		
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Ser Lys Phe Pro Phe Gly Ile Gln Gln Ala Lys Ser His Arg Asn Ile		
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Lys Leu Leu Glu Asp Glu Pro Arg Ser Arg Asp Glu Thr Pro Leu Cys		
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Thr Ile Ala His Trp Gln Asp Ser Leu Ala Lys Arg Cys Ile Cys Val		
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Ser Asn Ile Val Arg Ser Leu Ser Phe Val Pro Gly Asn Asp Ala Glu		

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 Trp Trp Asp Cys Leu Glu Val Leu Arg Asp Asn Thr Leu Val Thr Leu
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<211> 379

<212> DNA

<213> Homo sapiens

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120

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180

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 Ser Ser Pro Val Thr Glu Ser Trp Leu Cys Cys Arg Thr Gln Pro Lys
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<210> 1041
 <211> 388
 <212> DNA
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 35 40 45
 Phe Pro His Trp Pro Leu Trp Ala Leu Ala Leu Thr Thr Pro Val Val
 50 55 60
 Phe Trp Gly Ala Trp Pro Leu His His Ala Ala Trp Thr Asn Leu Arg
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 His Gly Ala Ala Ile Met Asp Thr Leu Val Ser Leu Gly Val Leu Thr
 85 90 95
 Ser Tyr Leu Trp Ser Val Trp Met Leu Thr Thr Gly Gly Glu His Leu
 100 105 110
 Tyr Leu Glu Val Ala Val His Arg His Asp Ala Asp Pro Gly Arg Gln
 115 120 125
 Ile

<210> 1043

<211> 555

<212> DNA

<213> Homo sapiens

<400> 1043

accggtgaaa ccctgatcgg ccaatcgttt tccaccgttc ccggcggcaa gggcgcaaac
 60
 caggcggtcg ctteggcgcg tcttggggcc gaagtcgcga tggtcgggtg cgtgggtacc
 120
 gatgcctacg gcgcgcaatt acgcgacgca ttgttggtgg aaggcatcga ttgccaggcc
 180
 gtcagcaccg tcgacgggtc cagcgggtg gcgctgatcg tggtaggatga cagcagccag
 240
 aatgcgatcg ttatcgtcgc cggtagcaat ggcgagctga ctccggccaa gttacagacc
 300
 tttgacagcg tgctgcaggc tgccgacgtg attgtctgcc agcttgagac gccgatggac
 360
 actgtcggcc atgcgcctaa gcgcggtcgc gaactgggca agacggtgat cctcaatccg
 420
 gcgccggcca gcggcccgt gcctgaggat tggtagccg ccatcgatta cctgattccc
 480
 aacgaaagcg aagcctcggc cttgagtggc gtggtggtgg attcactgga cagcgccaag
 540
 gtcgctgcta cgcgt
 555

<210> 1044

<211> 185

<212> PRT

<213> Homo sapiens

<400> 1044

Thr Gly Glu Thr Leu Ile Gly Gln Ser Phe Ser Thr Val Pro Gly Gly

1	5	10	15
Lys Gly Ala Asn Gln Ala Val Ala Ser Ala Arg Leu Gly Ala Glu Val			
20	25	30	
Ala Met Val Gly Cys Val Gly Thr Asp Ala Tyr Gly Ala Gln Leu Arg			
35	40	45	
Asp Ala Leu Leu Val Glu Gly Ile Asp Cys Gln Ala Val Ser Thr Val			
50	55	60	
Asp Gly Ser Ser Gly Val Ala Leu Ile Val Val Asp Asp Ser Ser Gln			
65	70	75	80
Asn Ala Ile Val Ile Val Ala Gly Ser Asn Gly Glu Leu Thr Pro Ala			
85	90	95	
Lys Leu Gln Thr Phe Asp Ser Val Leu Gln Ala Ala Asp Val Ile Val			
100	105	110	
Cys Gln Leu Glu Thr Pro Met Asp Thr Val Gly His Ala Pro Lys Arg			
115	120	125	
Gly Arg Glu Leu Gly Lys Thr Val Ile Leu Asn Pro Ala Pro Ala Ser			
130	135	140	
Gly Pro Leu Pro Glu Asp Trp Tyr Ala Ala Ile Asp Tyr Leu Ile Pro			
145	150	155	160
Asn Glu Ser Glu Ala Ser Ala Leu Ser Gly Val Val Val Asp Ser Leu			
165	170	175	
Asp Ser Ala Lys Val Ala Ala Thr Arg			
180	185		

<210> 1045

<211> 371

<212> DNA

<213> Homo sapiens

<400> 1045

ctattgccat actaccgccg cggcaacctta caggacatga tcaacgccaa cctcttcaat
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cactccaaat tccccgagac gcaccttatg aatctatttc tcggcgtctg caaggccctg
120
cgcgccatgc acgattacca cgcacccgccg gcagagcgca tgccaattgg gcaccgaagg
180
cagaccacca cccaggtgca aagcaacagt ggtagagcgg tcgctcatcg acgaaacgta
240
cggaagaaga cgaagagacg gagcaggaaa gacctgttat ggaatcacag aaccacatcg
300
ggcagggcgg cgagcacaaa accatatgcg catcgcgaca ttaaaccagg tacgtgctgc
360
aagctcctcg g
371

<210> 1046

<211> 123

<212> PRT

<213> Homo sapiens

<400> 1046

Leu Leu Pro Tyr Tyr Arg Arg Gly Asn Leu Gln Asp Met Ile Asn Ala		
1	5	10
Asn Leu Phe Asn His Ser Lys Phe Pro Glu Thr His Leu Met Asn Leu		

	20		25		30										
Phe	Leu	Gly	Val	Cys	Lys	Ala	Leu	Arg	Ala	Met	His	Asp	Tyr	His	Ala
	35						40					45			
Pro	Pro	Ala	Glu	Arg	Met	Pro	Ile	Gly	His	Arg	Arg	Gln	Thr	Thr	Thr
	50					55					60				
Gln	Val	Gln	Ser	Asn	Ser	Gly	Arg	Ala	Val	Ala	His	Arg	Arg	Asn	Val
65				70					75					80	
Arg	Lys	Lys	Thr	Lys	Arg	Arg	Ser	Arg	Lys	Asp	Leu	Leu	Trp	Asn	His
			85						90					95	
Arg	Thr	Thr	Ser	Gly	Arg	Ala	Ala	Ser	Thr	Lys	Pro	Tyr	Ala	His	Arg
			100						105					110	
Asp	Ile	Lys	Pro	Gly	Thr	Cys	Cys	Lys	Leu	Leu					
	115						120								

<210> 1047

<211> 754

<212> DNA

<213> Homo sapiens

<400> 1047

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natgcccaga aggacctgga cgaggcggtg ccagccctgg atgcggctct ggccagccta
60
cgcaacctca acaagaacga agtgaccag gtacgtgcc tgcagcggcc acccccggtt
120
gtgaaactgg tcatagaagc tgtgtgcatt atgaaaggca tcaagcccaa gaagggtgcct
180
ggagaaaagc caggcaccaa ggtggatgac tactgggagc ctggcaaggg gctgctgcag
240
gacccggggc acttccttga ggcctcttc aagtttgaca aggacaacat tggagatgtg
300
gtgatcaaag ccatccagcc gtacatcgat aatgaagagt tccagccagc caccattgcc
360
aagggtgcc aagggttgc cttcatttgg ccggtggggg gggcaatgcc caagtacccc
420
tttgtggcca aggcgtgga gcccaagcgg caagccctgc tggaggccca ggatgacctg
480
ggggtgacac agaggatcct ggatgaggca aaacagcgcc ttcgtgaggt ggaggacggc
540
atcgccacaa tgcaggctaa gtaccgggaa tgcattacca agaaggagga gctggagctg
600
aagtgtgagc agtgtgagca ggggtgggc cagctggca aggtgcgac cctcctcctg
660
caaggcctgc aagcgggccc ggcccagaca ggggccagaa aggaccaggg cgccggtggg
720
tcctggggtg gctgtccaac cccctccctg gcaa
754

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<210> 1048

<211> 251

<212> PRT

<213> Homo sapiens

<400> 1048

Xaa Ala Gln Lys Asp Leu Asp Glu Ala Leu Pro Ala Leu Asp Ala Ala

1	5	10	15
Leu Ala Ser Leu Arg Asn Leu Asn Lys Asn Glu Val Thr Gln Val Arg			
20	25	30	
Ala Met Gln Arg Pro Pro Pro Gly Val Lys Leu Val Ile Glu Ala Val			
35	40	45	
Cys Ile Met Lys Gly Ile Lys Pro Lys Lys Val Pro Gly Glu Lys Pro			
50	55	60	
Gly Thr Lys Val Asp Asp Tyr Trp Glu Pro Gly Lys Gly Leu Leu Gln			
65	70	75	80
Asp Pro Gly His Phe Leu Glu Ser Leu Phe Lys Phe Asp Lys Asp Asn			
85	90	95	
Ile Gly Asp Val Val Ile Lys Ala Ile Gln Pro Tyr Ile Asp Asn Glu			
100	105	110	
Glu Phe Gln Pro Ala Thr Ile Ala Lys Val Ser Lys Gly Cys Pro Phe			
115	120	125	
Ile Trp Pro Trp Gly Gly Ala Met Pro Lys Tyr Pro Phe Val Ala Lys			
130	135	140	
Ala Val Glu Pro Lys Arg Gln Ala Leu Leu Glu Ala Gln Asp Asp Leu			
145	150	155	160
Gly Val Thr Gln Arg Ile Leu Asp Glu Ala Lys Gln Arg Leu Arg Glu			
165	170	175	
Val Glu Asp Gly Ile Ala Thr Met Gln Ala Lys Tyr Arg Glu Cys Ile			
180	185	190	
Thr Lys Lys Glu Glu Leu Glu Leu Lys Cys Glu Gln Cys Glu Gln Arg			
195	200	205	
Leu Gly His Ala Gly Lys Val Arg Thr Leu Leu Leu Gln Gly Leu Gln			
210	215	220	
Ala Gly Pro Ala Gln Thr Gly Ala Arg Lys Asp Gln Gly Ala Gly Gly			
225	230	235	240
Ser Trp Gly Gly Cys Pro Thr Pro Ser Leu Ala			
245	250		

<210> 1049

<211> 558

<212> DNA

<213> Homo sapiens

<400> 1049

cgcagcaata gctgcacttg accagactgg gctttgcaat aagcgcatc cccgggctga

60

atgctgcaga tccttacagg ctgactgcag ggtgtttcag attctcctgg agtcacacgt

120

gccagcttga tttcaagaaa caactagaat aacagttttc tgataagaag tctatagcac

180

tttatggcctt acataatcca gagatagatg ggctgggcat gattcccatt ttctgttggg

240

gaaaccgact cacagagaag ttaagggaca agtataaagt gatgaaactg tgtactgaac

300

ctcatgtctc ccagactccc ggggtccccg gctttttctc ggggcggccc cattcacatt

360

gcaattcatg gccggggcaa atgctcacc acagagatat taagcactcc aacactccat

420

ccaccaggtt gcagccaaag gattcagaag acaatgatca ttccatcagc atgcactatg

480

cagctaaaga aaggttttgg catgctctgc tttattgttt cacagaagat aagaaaataa
 540
 actgcaaagt aacttaag
 558

<210> 1050
 <211> 112
 <212> PRT
 <213> Homo sapiens

<400> 1050
 Met Ile Pro Ile Phe Cys Trp Gly Asn Arg Leu Thr Glu Lys Leu Arg
 1 5 10 15
 Asp Lys Tyr Lys Val Met Lys Leu Cys Thr Glu Pro His Val Ser Gln
 20 25 30
 Thr Pro Gly Ser Pro Gly Phe Phe Ser Gly Arg Pro His Ser His Cys
 35 40 45
 Asn Ser Trp Pro Gly Gln Met Leu Thr His Arg Asp Ile Lys His Ser
 50 55 60
 Asn Thr Pro Ser Thr Arg Leu Gln Pro Lys Asp Ser Glu Asp Asn Asp
 65 70 75 80
 His Ser Ile Ser Met His Tyr Ala Ala Lys Glu Arg Phe Trp His Ala
 85 90 95
 Leu Leu Tyr Cys Phe Thr Glu Asp Lys Lys Ile Asn Cys Lys Val Thr
 100 105 110

<210> 1051
 <211> 317
 <212> DNA
 <213> Homo sapiens

<400> 1051
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 60
 aatccgggta atcttcgtct caatttcagt cacatcgac cggagcgtct ggacgaaggt
 120
 ctcaagcgcc tggctgctgt catccgtcac gcacaggctg cacaagcggc ttaaggggag
 180
 ggccatgtac aaggtttatg gcgattacca gtcgggcaat tgctacaaga tcaagctgat
 240
 gctgcacctg ctggggcagg aatatcgctg gcacccgggg gacatcctca aggtgacacc
 300
 gagaccccg aattttt
 317

<210> 1052
 <211> 57
 <212> PRT
 <213> Homo sapiens

<400> 1052
 Ala Leu Ser Arg Asp Val Ala Phe Met Pro Gly Glu Pro Phe Phe Ala
 1 5 10 15
 Glu Pro Glu Arg Asn Pro Gly Asn Leu Arg Leu Asn Phe Ser His Ile

20 25 30
 Ala Pro Glu Arg Leu Asp Glu Gly Leu Lys Arg Leu Ala Ala Val Ile
 35 40 45
 Arg His Ala Gln Ala Ala Gln Ala Ala
 50 55

<210> 1053
 <211> 318
 <212> DNA
 <213> Homo sapiens

<400> 1053
 caattggcta cgcgatccga acgggcgcat gggctcttat gactggcaag ccgtcgctcg
 60
 cggggagtgg gccctcgact atgcctacgc gatgtcgggtg aacctgacca ccgagaaccg
 120
 gcgtgcctgg gaacgcgacc tgctcgagcg ttatctgtgg cgcctcgccg aagaggggtg
 180
 cgccaacccg ccctcgttcg agcaagcgtg gctacgctac cggcaacagc cgttccacgt
 240
 cgggatcttc tcaactctga ccacggcgcg cggacgcttt caaccggcca tgcaaccggc
 300
 ggactcnnnn ccccnncnc
 318

<210> 1054
 <211> 96
 <212> PRT
 <213> Homo sapiens

<400> 1054
 Met Gly Leu Tyr Asp Trp Gln Ala Val Ala Arg Gly Glu Trp Ala Leu
 1 5 10 15
 Asp Tyr Ala Tyr Ala Met Ser Val Asn Leu Thr Thr Glu Asn Arg Arg
 20 25 30
 Ala Trp Glu Arg Asp Leu Leu Glu Arg Tyr Leu Trp Arg Leu Ala Glu
 35 40 45
 Glu Gly Val Ala Asn Pro Pro Ser Phe Glu Gln Ala Trp Leu Arg Tyr
 50 55 60
 Arg Gln Gln Pro Phe His Val Gly Ile Phe Ser Leu Leu Thr Ile Gly
 65 70 75 80
 Ala Gly Arg Phe Gln Pro Ala Met Gln Pro Ala Asp Ser Xaa Pro Xaa
 85 90 95

<210> 1055
 <211> 391
 <212> DNA
 <213> Homo sapiens

<400> 1055
 tacaatgtat catcaaccag aaatacaatg agaaccacct gccagtctcc caaatactat
 60
 ctgcagccac tcatttaact ctctgggcta gctccacgtg ggccgtctga actctcttag
 120

aagaatcatc tctctgctca ggcaccggga gcaaggggca tctgtcgctc tgcagaacgg
 180
 aggggaccag gcctgatgaa caccatcctg ggcccagaaa cctgggaggg taaagagaac
 240
 tgccagggggt gaagtccaag gatgggaaaa aggcctccgg ggcagagtcc tgaaatgtca
 300
 gaagtacacc aaagaggaaa cagcatcacg ttattgctga ggcagggcct cattctgttg
 360
 ccaaggctgc agtgcagtgg tgacaccatg g
 391

<210> 1056

<211> 83

<212> PRT

<213> Homo sapiens

<400> 1056

Met	Val	Ser	Pro	Leu	His	Cys	Ser	Leu	Gly	Asn	Arg	Met	Arg	Pro	Cys
1				5					10					15	
Leu	Ser	Asn	Asn	Val	Met	Leu	Phe	Pro	Leu	Trp	Cys	Thr	Ser	Asp	Ile
		20						25					30		
Ser	Gly	Leu	Cys	Pro	Gly	Gly	Leu	Phe	Pro	Ile	Leu	Gly	Leu	His	Pro
		35					40					45			
Trp	Gln	Phe	Ser	Leu	Pro	Ser	Gln	Val	Ser	Gly	Pro	Arg	Met	Val	Phe
	50					55				60					
Ile	Arg	Pro	Gly	Pro	Leu	Arg	Ser	Ala	Glu	Arg	Gln	Met	Pro	Leu	Ala
65					70					75				80	
Pro	Gly	Ala													

<210> 1057

<211> 341

<212> DNA

<213> Homo sapiens

<400> 1057

gaattccctg cgcgtgtgac gccggtcgcc gagcaactcg gcgtgtcgct gacgctgcat
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 cccgatgata cgccgcgtcc gctgttcggg ttgccgcgca ttgcgtccag cgccgaggac
 120
 tatcaggcgc tgttcgatgc ggtaccgtcc aaggcgaacg gcatctgcct gtgcacgggt
 180
 tcgctcggcg tgcgcgcgga gaacgatctg cctgaaatgg ccgaacgttt cggcccgcgt
 240
 atgcctttt cgcattctgcg cgcgaccaag cgcgacgccg atggcctgtc gtttcatgaa
 300
 tccgaccatc tcgacggcga tgctgacatg gtcgcgtgct c
 341

<210> 1058

<211> 113

<212> PRT

<213> Homo sapiens